REPAIR MANUAL
&
PARTS LIST

FOR

FUJICA AX-3

FUJI PHOTO FILM CO., LTD.
26-30, Nishiazabu 2-Chome, Minato-ku, Tokyo 106, Japan

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I TROUBLESHOOTING

1. Film advance lever cannot be turned.

Remove the bottom cover assembly (2-70), and see if the shutter blinds run or not.

a. The shutter blinds run.

- The notched gear (5-67) is in collision with the clutch gear (5-122).
- The release lever (5-99) is not released by the cam plate (5-83). (In this case, the mirror does not come down.)

b. The shutter blinds do not run.

Is the electrical circuit operating sequentially?
(Set shutter speed to 2 sec. or 1 sec., look into the viewfinder, release the shutter, and see if the LED in the viewfinder goes out for 2 or 1 second. When the LED goes out for the time of shutter speed, the electrical circuit is operating sequentially.)

YES

Apply DC 2.5V across lead wires (7-23 and 7-24) of the ML magnet assembly (4-65), and see if the ML magnet operates or not.

- The ML magnet assembly operates — The lead wire between the M-circuit board assembly (2-64) and amplifier assembly (2-13) is defective.
- The ML magnet assembly does not operate
  - The coil is broken or short-circuited.
  - The quick return mechanism releasing system (engagement between lever (4-85) and assembly (4-90)) is defective.

NO

Repair the electrical circuit.

2. **The film advance lever can be turned but the shutter cannot be charged.**

Wind up the film advance lever and see if the aperture lever (4 - 56) and mirror (4 - 8) moves or not.

a. The lever (4 - 56) and mirror (4 - 8) move as the film advance lever is wound up.
   - Insufficient attracting force of the ML magnet (4 - 65).
   - Improper operation of the lever (4 - 15) or improper hook shape.

b. The lever (4 - 56) and mirror (4 - 8) do not move but the shutter still cannot be charged
   - o The magnet assembly (5 - 73) does not stop the shutter blinds.
   - o The quick return charge lever assembly (4 - 90) has been released continuously by the release lever (5 - 99).
   - o The lever (4 - 85) does not engage with the quick return charge lever assembly (4 - 90).

3. **The mirror does not come down**

The cam plate (5 - 83) does not kick the release lever (5 - 99) to release the quick return charge lever assembly (4 - 90).

4. **The mirror does not rise**

- o Apply DC 2.5V across lead wires (7 - 23 and 7 - 24) of the ML magnet assembly (4 - 65), and see if the ML magnet operates or not.
  - YES — The lead wire between the M - circuit board assembly (2 - 64) and amplifier assembly (2 - 13) is defective.
  - NO — The coil is broken or short - circuited.
- o Disengaged mirror kick - up system.

5. **LED does not light.**

   Refer to 15 and check the electrical circuit.

6. **LED does not operate.**

   Refer to 15 and check the electrical circuit.

7. **Flash does not work correctly.**

   Refer to 15 and check the electrical circuit.

8. **Self-timer does not work correctly.**

   Refer to 15 and check the electrical circuit.

9. **Correct shutter speed is not provided.**

   - Readjust the magnet assembly (5-73).
   - Refer to 15 and check the electrical circuit.

10. **LED display in the viewfinder does not work correctly.**

    Refer to 15 and check the LED.

11. **Auto Winder is not interlocked with the camera correctly.**

    - Refer to 15 and check the electrical circuit.
    - Check the Auto Winder proper.

II DISASSEMBLY

1. Top cover assembly (1 - 1)

   a. Remove the FUJICA name plate assembly (1 - 80).

   b. Turn the film rewind crank assembly (1 - 54) counterclockwise, and remove it from the rewind spindle (6 - 111).

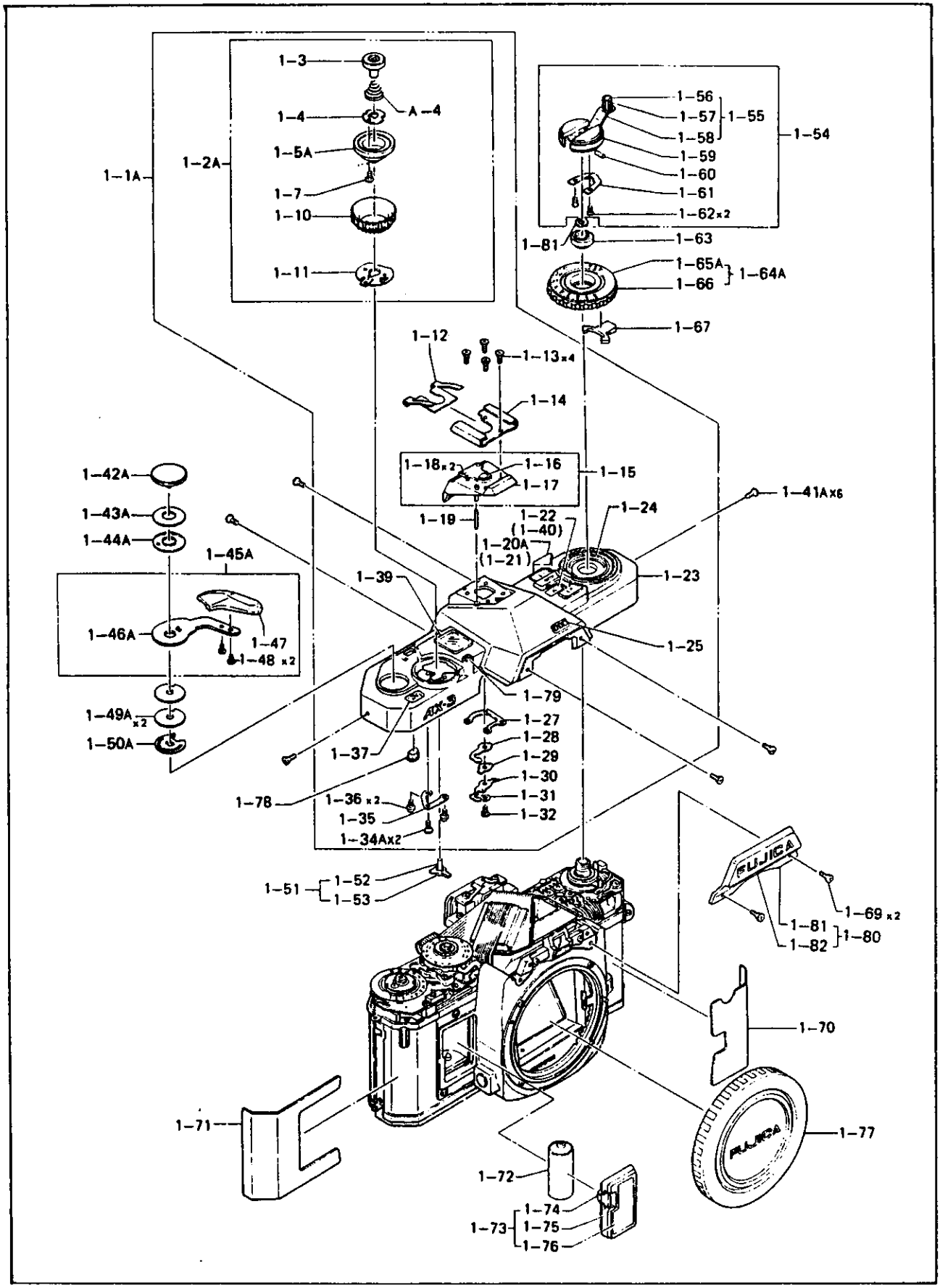
   c. Remove the holder (1 - 63) and remove the film speed selector assembly (1 - 64).

   d. Turn the screw (1 - 42) counterclockwise, and remove the film advance lever assembly (1 - 45).

   e. Remove six screws (1 - 41).

   f. Remove the top cover assembly carefully so that the film rewind button (1 - 78) and relay shaft assembly (1 - 51) will not be dropped off.

Fig. 1


1-3
A-4
1-4
1-5A
1-2A
1-1A
1-7
1-10
1-11
1-56
1-57
1-58
1-55
1-54
1-59
1-60
1-61
1-62x2
1-81
1-63
1-65A
1-66
1-64A
1-67
1-12
1-13x4
1-14
1-18x2
1-16
1-17
1-15
1-19
1-22
(1-40)
1-20A
(1-21)
1-24
1-41Ax6
1-42A
1-43A
1-44A
1-45A
1-39
1-23
1-46A
1-47
1-48x2
1-25
1-49Ax2
1-50A
1-79
1-27
1-28
1-29
1-30
1-31
1-32
1-37
1-78
1-36x2
1-35
1-34Ax2
1-51
1-52
1-53
FUJICA
1-69x2
1-81
1-82
1-80
1-70
1-71
1-77
1-72
1-74
1-73
1-75
1-76

2. Focusing screen (2-33)

   a. Remove two screws (2-26) from the lens mount side carefully so that the nuts (2-27) will not be dropped off.

   b. Remove the cover plate (2-24) and pull out the focusing screen (2-33).

      NOTE: When installing a focusing screen, hook it on the leaf spring (2-34), and hold down the front side with the cover plate (2-24).

3. Amplifier assembly (2-13)

   a. Remove two screws (2-9), and remove the channel plate B (2-10) and rubber cushion (2-11).

   b. Remove the E-clip (2-50).
      Be careful not to lose the washer (2-51) counterclockwise.

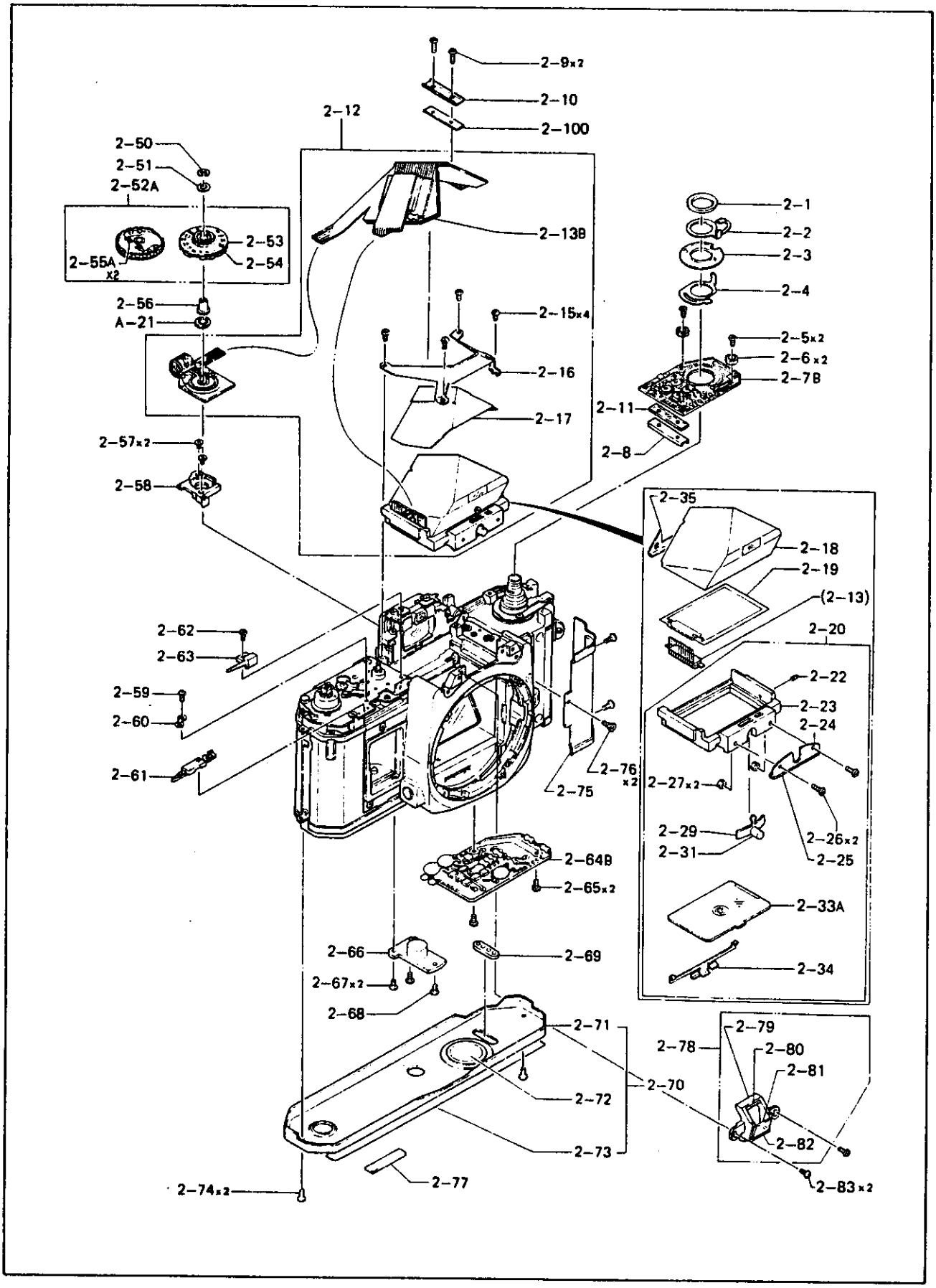
   c. Remove the holder (2-56) and remove the T-value printed circuit board.

   d. Remove four screws (2-15).

   e. Take out the amplifier assembly (2-13) together with the prism case assembly (2-20).

      NOTE: Carry out the work without disconnecting lead wires of the S1-S2 switch, S3 switch, etc., but removing screws (2-59 and 2-62).

Fig. 2


2-9x2
2-10
2-100
2-12
2-50
2-51
2-52A
2-53
2-54
2-55A x2
2-56
A-21
2-138
2-15x4
2-16
2-17
2-57x2
2-58
2-1
2-2
2-3
2-4
2-5x2
2-6x2
2-7B
2-11
2-8
2-35
2-18
2-19
(2-13)
2-20
2-22
2-23
2-24
2-62
2-63
2-59
2-60
2-61
2-76 x2
2-75
2-27x2
2-29
2-31
2-26x2
2-25
2-64B
2-65x2
2-33A
2-34
2-66
2-67x2
2-68
2-69
2-71
2-70
2-72
2-73
2-74x2
2-77
2-78
2-79
2-80
2-81
2-82
2-83x2

4. Lens mount base assembly (3 - 54)

   a. Remove the amplifier assembly (2 - 13).

   b. Remove four screws (3 - 50).

   c. Disconnect the lead wires (7 - 31 and 7 - 32) extended from the M - circuit board assembly (2 - 64).

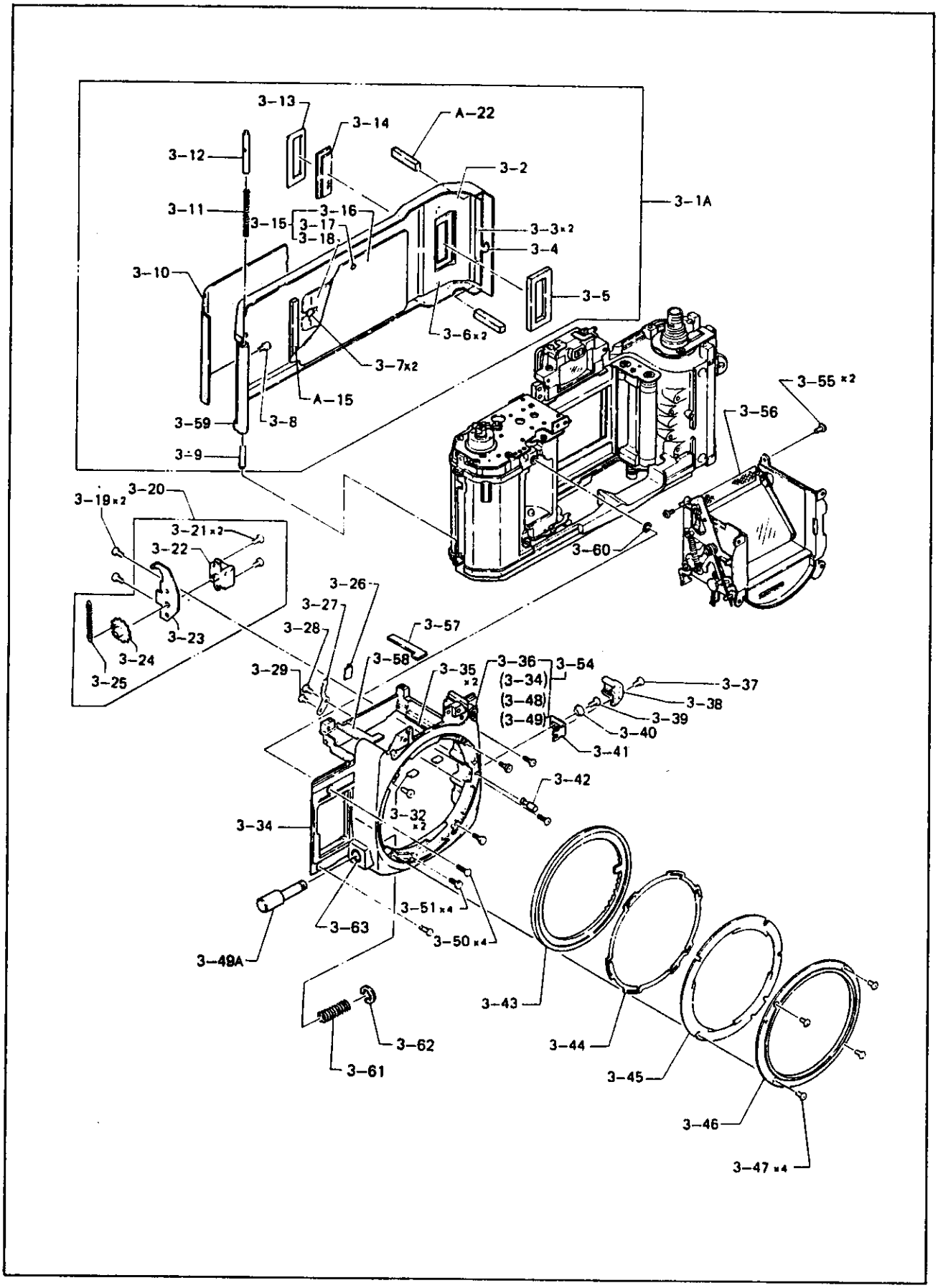
5. Mirror case assembly (4 - 10)

   a. Remove four screws (3 - 47), and disassemble the lens mount base assembly (3 - 54).

   b. Remove four screws (3 - 51).

   c. Remove two screws (3 - 55). The mirror case assembly (4 - 10) can then be removed.

Fig. 3


3-13
3-14
A-22
3-12
3-2
3-1A
3-11
3-15
3-16
3-17
3-18
3-3×2
3-4
3-10
3-5
3-6×2
3-7×2
A-15
3-59
3-8
3-9
3-55×2
3-56
3-60
3-19×2
3-20
3-21×2
3-22
3-23
3-24
3-25
3-26
3-27
3-28
3-57
3-58
3-29
3-35×2
3-36
(3-34)
(3-48)
(3-49)
3-54
3-37
3-38
3-39
3-40
3-41
3-42
3-34
3-32×2
3-51×4
3-63
3-50×4
3-49A
3-43
3-44
3-45
3-46
3-47×4
3-62
3-61

6. Focal plane shutter assembly (5 - 20)

a. Remove the clutch (5 - 70) and other auto - winder relative parts by turning the clutch clockwise.

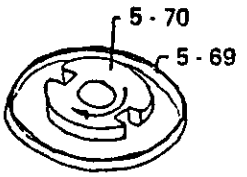
b. Remove three screws (5 - 72).

c. Remove the focal plane shutter assembly (5 - 20) from the camera body.

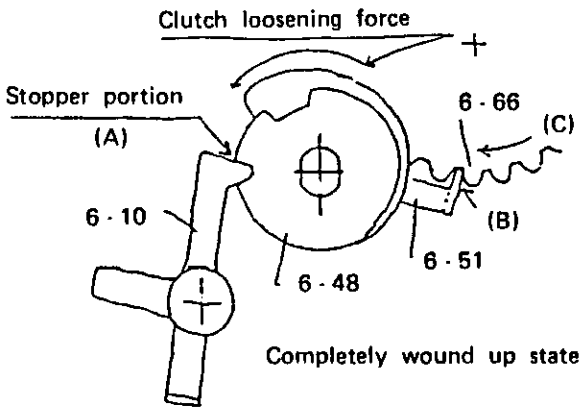
NOTE: When removing the clutch (5 - 70), be sure to wind up the film advance lever in a half way.
Failure from this will cause the lever (6 - 51) to be bent.

Method to remove clutch (5 - 70)

When replacing the focal - plane shutter or notched gear (5 - 67) with a new one and the clutch (5 - 70) must be removed, be sure to remove the clutch in accordance with the following instructions.



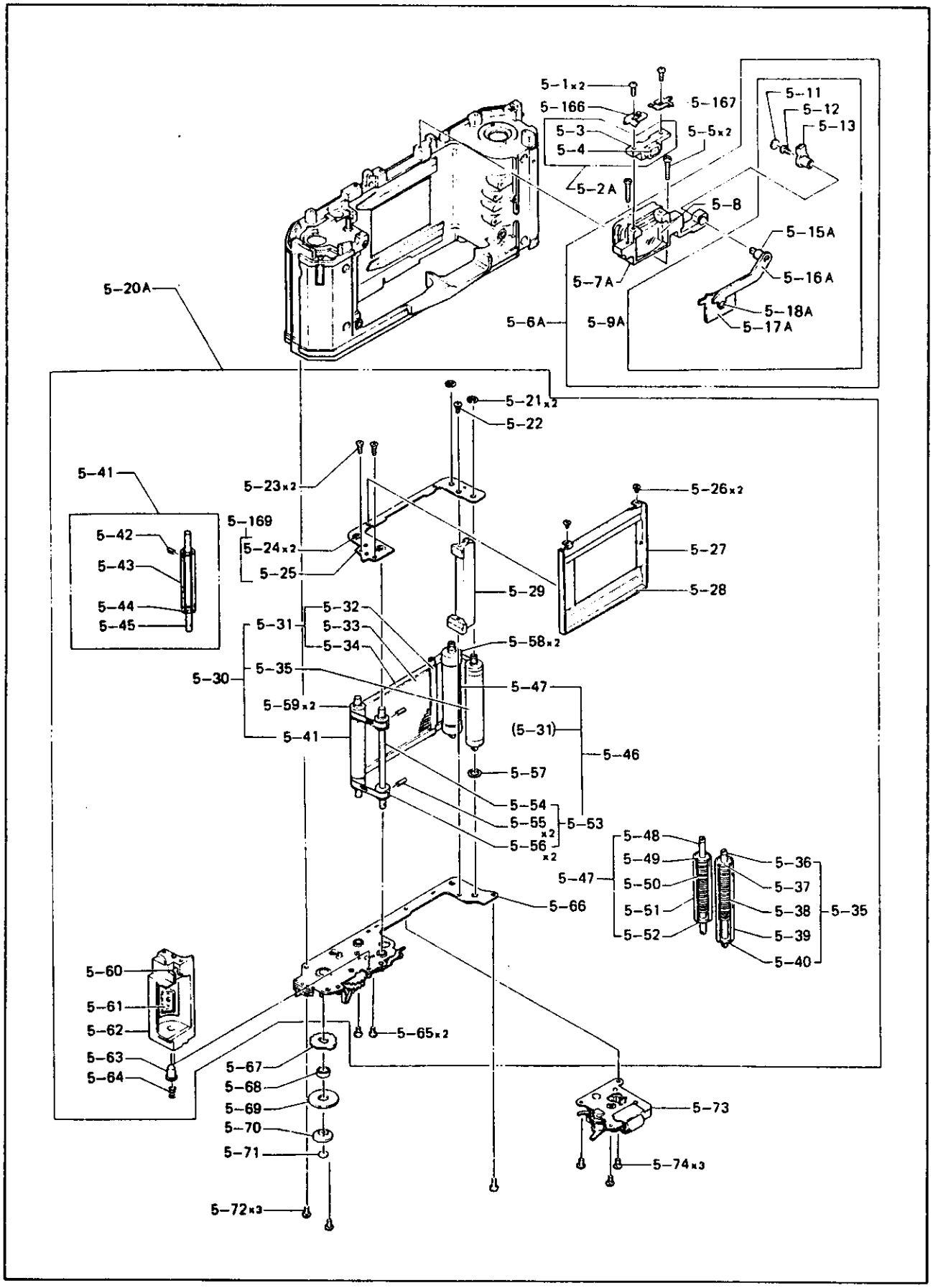
1. Wind up the film advance lever completely.
2. Loosen the clutch (5 - 70) with a special tool.
3. When the film advancing mechanism is hooked in a half way, loosen the clutch (5 - 70) by holding the sprocket.



- Portion (B) does not work as a stopper when the film advance lever is wound up completely, and therefore, the pawl (6 - 51) is not deformed.

- When the film advance lever is not wound up completely (When the film advancing mechanism is hooked in a half way), the portion (B) works as a stopper causing the pawl (6 - 51) to be bent or broken.

Fig. 4


5-1x2
5-166
5-167
5-3
5-4
5-5x2
5-2A
5-11
5-12
5-13
5-8
5-15A
5-16A
5-18A
5-17A
5-7A
5-6A
5-9A
5-20A
5-21x2
5-22
5-41
5-23x2
5-26x2
5-169
5-42
5-24x2
5-27
5-43
5-25
5-29
5-28
5-44
5-45
5-32
5-31
5-33
5-34
5-58x2
5-30
5-35
5-47
5-59x2
(5-31)
5-41
5-46
5-57
5-54
5-55x2
5-53
5-56x2
5-48
5-49
5-36
5-47
5-50
5-37
5-38
5-35
5-51
5-39
5-52
5-40
5-66
5-60
5-61
5-62
5-65x2
5-63
5-64
5-67
5-68
5-69
5-70
5-71
5-73
5-74x3
5-72x3

Ⅲ REASSEMBLY, REPAIR AND ADJUSTMENT

1. Reassembly and adjustment of parts relative to the camera body

1-1 Film chamber door lock

a. Check the pin (6 - 102) to insure that it is caulked on the camera body (6 - 88) securely.

b. Check the lock plate (6 - 106) to insure that it has been installed securely with two screws (6 - 105).
Make sure that two square openings on the lock plate (6 - 106) with which the lock plate is guided are properly lubricated with Helicolube - Molycote mixed grease.

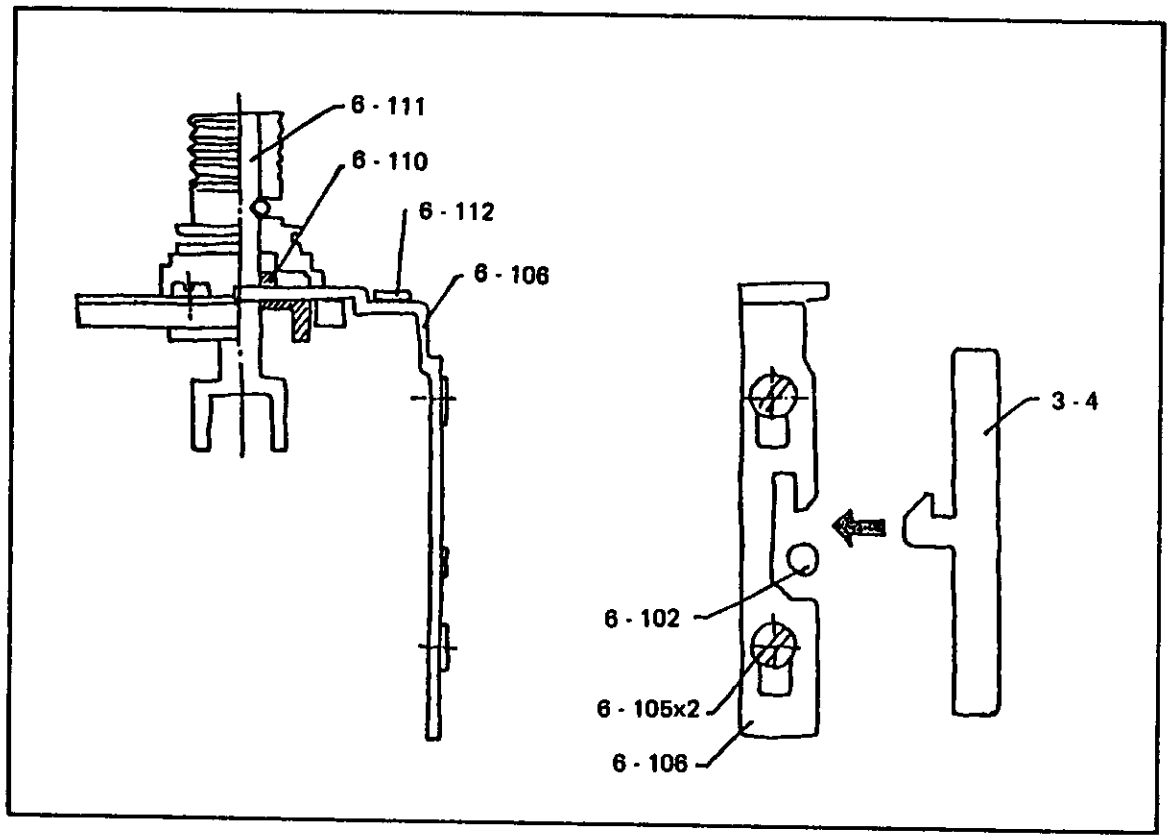
c. Check the leaf spring (6 - 112) and lock plate (6 - 106) to insure that their contact surfaces are lubricated properly with Helicolube - Molycote mixed grease.

d. Check the lock plate (6 - 106) to insure that the head of the lock plate is on the step of the light shielding barrel (6 - 110).

e. Pull the rewind spindle (6 - 111), and make sure that the lock plate (6 - 106) moves smoothly.

f. Check the hook plate (3 - 4) of the film chamber door to insure that it is correctly guided by the pin (6 - 102) so that the film chamber door engages with the lock plate (6 - 106) smoothly with a snap without deforming the film chamber door.

Fig. 5



1-2 Friction of take-up spool

a. The rated friction is 220 to 300 grams.
To check friction, wind a piece of string around the spool (6-93), turn the film advance lever and measure actually effective torque at the time when the spool slips.

b. To adjust friction, adjust bent diameter of the friction ring (6-91).

c. Apply Losoid grease 72510 between the friction plate (6-91) and collar (6-92).

d. Make sure that the spool turns toward both the forward and backward directions.

NOTE: Spool becomes abnormally heavy when the collar (6-76) of the take-up spindle assembly (6-74) is not positioned correctly with the collar (6-76) assembled with the friction plate (6-91).

1-3 Friction of rewind spindle assembly (6-107)

a. The rated friction is 10 to 60 gr-cm. When adjustment is required, properly change shape of the click spring (6-108).

b. When installing the friction spring (6-108), be careful not to deform it.

c. Apply Losoid grease 72510 to the sliding surface and groove of the rewind spindle (6-111).

Fig. 6

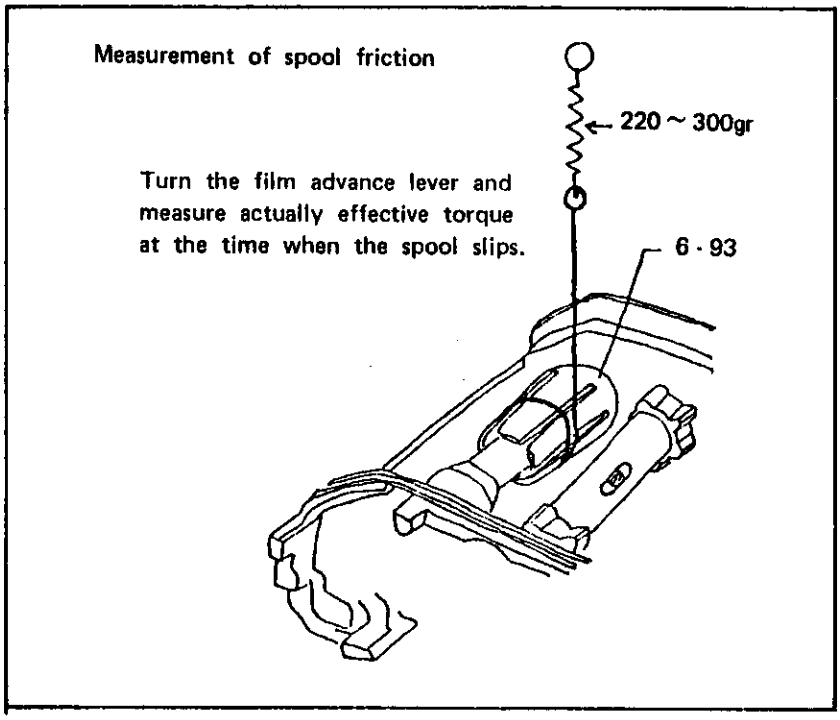

Measurement of spool friction
220 ~ 300gr
Turn the film advance lever and measure actually effective torque at the time when the spool slips.
6 - 93

Fig. 7

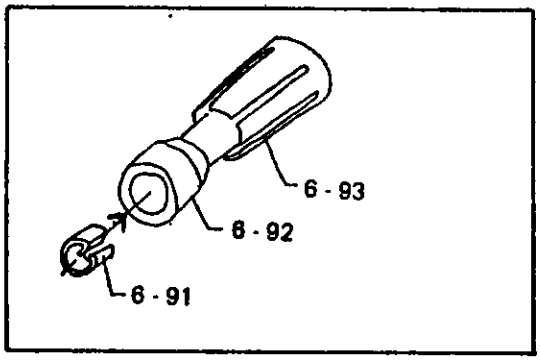


Fig. 8

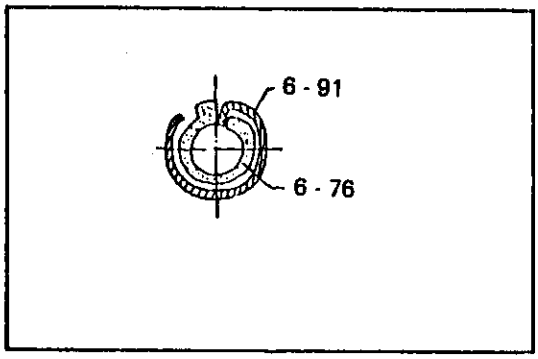
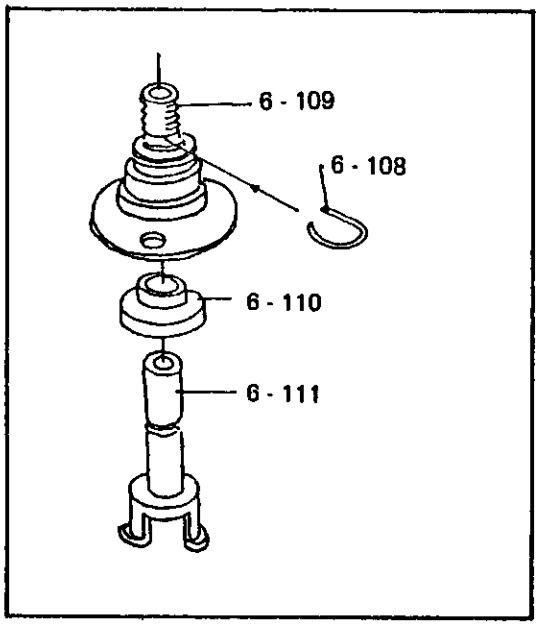


Fig. 9



1 - 4 Installing neck strap eyelets (6 - 103)

Fit the two neck strap eyelets (6 - 103) into the camera body (6 - 88), and install them securely with two screws (6 - 104) after applying Araldite to the screws.

1 - 5 Installing shaft (6 - 84)

Apply Araldite to the threaded portion of the shaft (6 - 84), and screw the shaft into the camera body (6 - 88) correctly.

1 - 6 Sprocket (6 - 79)

a. Check the sprocket shaft assembly (6 - 80) to insure that it is operated smoothly by the spring (6 - 96).

b. Check the screw (6 - 78) to insure that it is securely tightened.

NOTE: Be sure to tighten the screw at the side where a spot facing has been made on the sprocket shaft (6 - 82).

c. Description for operation of film advance system at the time of multiple exposures

When the sprocket shaft assembly (6 - 80) is pushed down hard (in other words, when the film rewind button (1 - 78) is pushed down deeply), the pin (6 - 81) comes into contact with the main body of the sprocket shaft assembly (6 - 80). Thus, the sprocket shaft assembly (6 - 80) no longer rotates. For this reason, when the film advance lever is wound up with the film rewind button (1 - 78) pushed deeply, the sprocket (6 - 79) does not rotate but the shutter is charged. Consequently, both the film and exposure counter are not advanced, permitting the camera to make a duplicated exposure on the same picture frame.

NOTE: When depth of the hole on the dicast body is excessive, the sprocket will not be stopped even if the film rewind button is pushed from the outside of the top cover.

Fig. 10

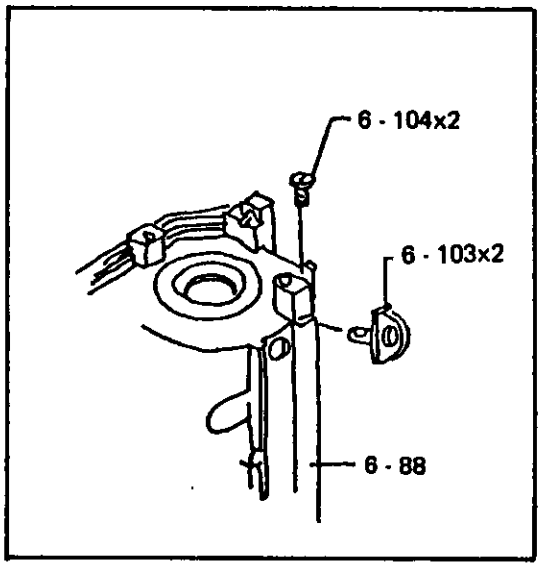


Fig. 11

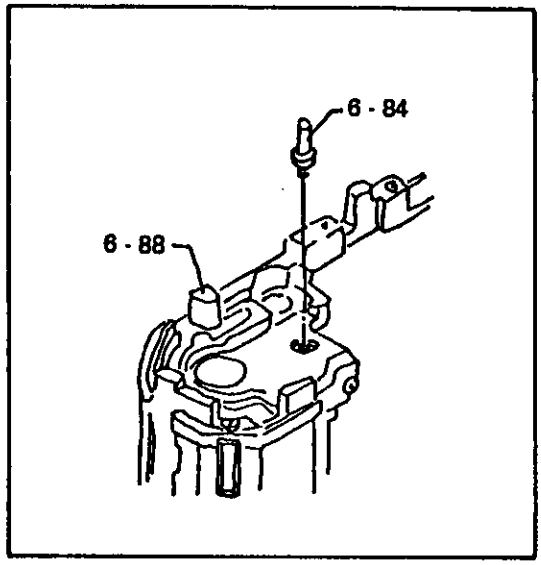
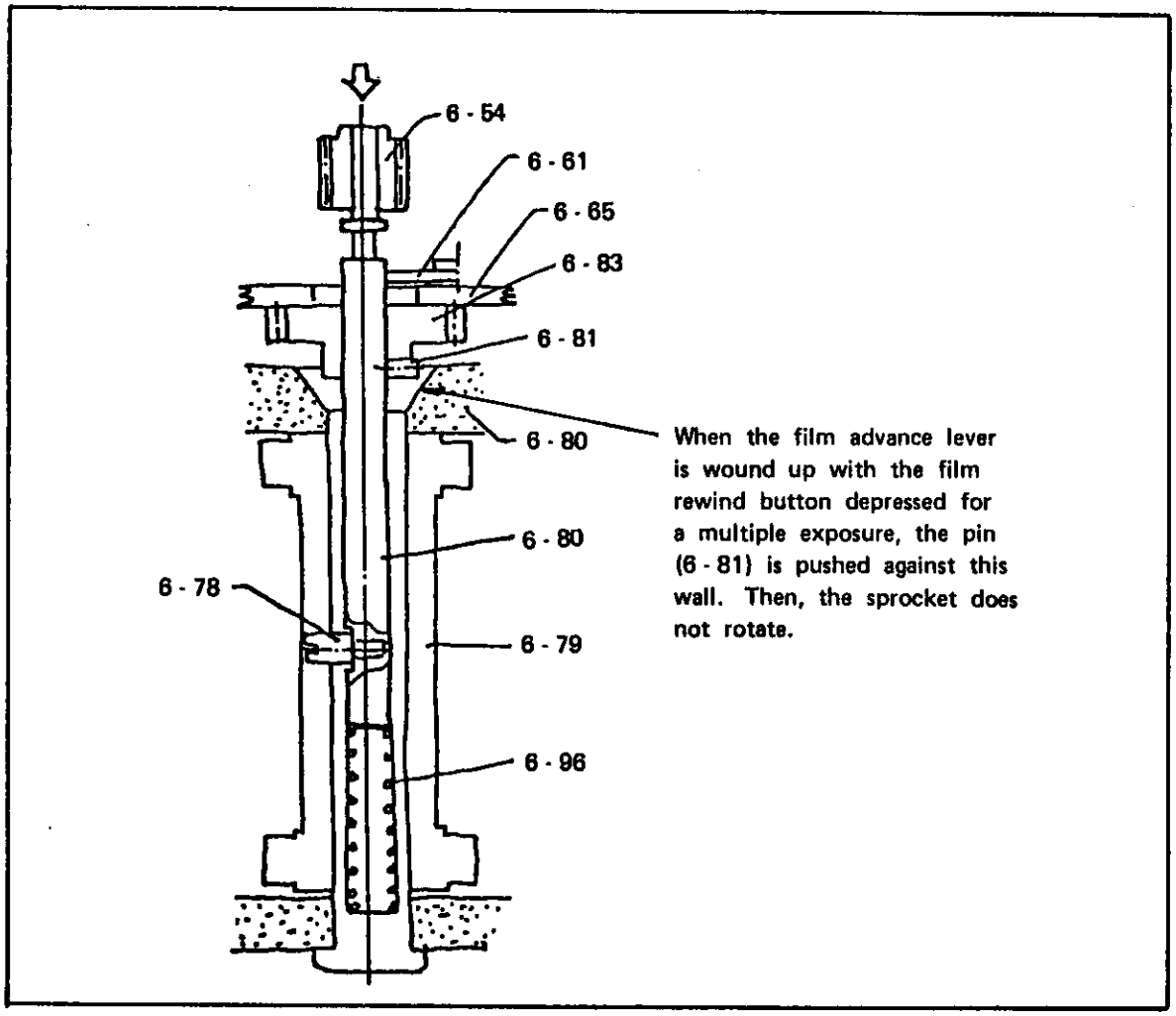


Fig. 12


6 - 54
6 - 61
6 - 65
6 - 83
6 - 81
6 - 80
6 - 80
6 - 78
6 - 79
6 - 96
When the film advance lever is wound up with the film rewind button depressed for a multiple exposure, the pin (6 - 81) is pushed against this wall. Then, the sprocket does not rotate.

1 - 7 Installing base plate assembly (6 - 58)

a. Apply Helicolube - Molycote mixed grease to the gear and shaft holding parts.

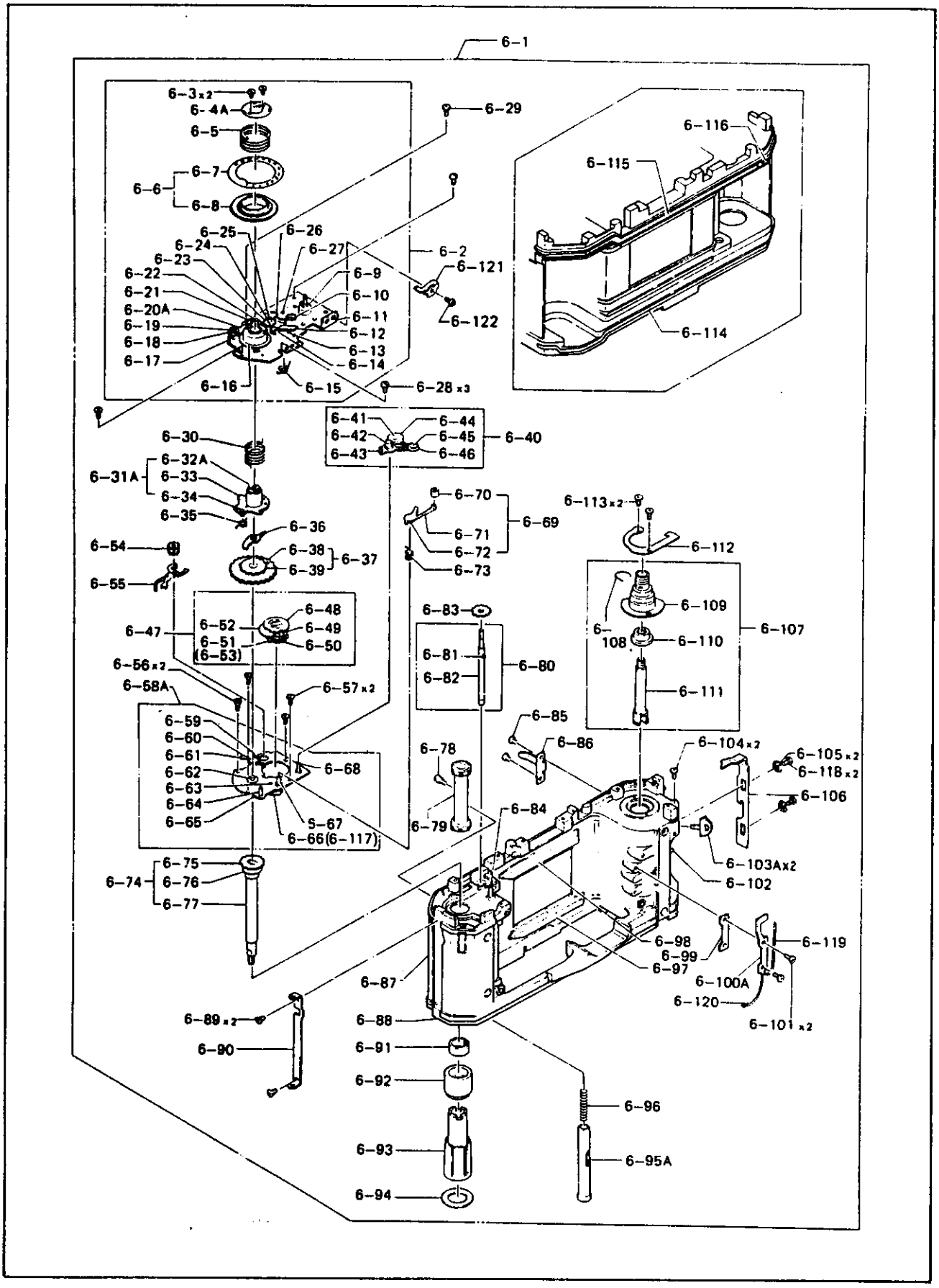
b. Install the lever (6 - 61) by matching its direction so that a locking can be attained when the sprocket shaft assembly (6 - 80) is pushed down.

c. Match the positioning pin (6 - 64) and other parts which are projected out from the base plate (6 - 65) to the appropriate holes on the camera body (6 - 88).

NOTE: 1. When the base plate (6 - 65) is installed, it should not have been floated. If the base plate is floated, the pin (6 - 81) of the sprocket shaft assembly (6 - 80) does not engage with the gear (6 - 83) sufficiently, and the pin may disengage with the gear when advancing film.

2. Those manufactured during the initial manufacturing period may use a washer to hold the gear (6 - 83) on the camera body and shape of long hole on the sprocket (6 - 79) may differ from that on the recently manufactured sprockets. These are to prevent idling of the sprocket.

Fig. 13


6-1
6-3 x2
6-4A
6-5
6-6
6-7
6-8
6-25
6-26
6-24
6-27
6-23
6-22
6-21
6-20A
6-19
6-18
6-17
6-16
6-15
6-2
6-9
6-10
6-11
6-12
6-13
6-14
6-29
6-121
6-122
6-28 x3
6-116
6-115
6-114
6-41
6-42
6-43
6-44
6-45
6-46
6-40
6-30
6-31A
6-32A
6-33
6-34
6-35
6-36
6-37
6-38
6-39
6-54
6-55
6-70
6-71
6-72
6-73
6-69
6-113 x2
6-112
6-109
6-108
6-110
6-107
6-111
6-47
6-48
6-49
6-50
6-51
(6-53)
6-52
6-83
6-81
6-82
6-80
6-56 x2
6-58A
6-57 x2
6-59
6-60
6-61
6-62
6-63
6-64
6-65
6-68
6-67
6-66(6-117)
6-85
6-86
6-78
6-79
6-84
6-104 x2
6-105 x2
6-118 x2
6-106
6-103A x2
6-102
6-74
6-75
6-76
6-77
6-98
6-99
6-97
6-119
6-100A
6-120
6-101 x2
6-87
6-89 x2
6-90
6-88
6-91
6-92
6-93
6-94
6-96
6-95A

1 - 8 Gear assembly (6 - 47) and perforation positioning control

a. Gear assembly (6 - 47)

- Check the cam plate (6 - 52) and stopper (6 - 48) to insure that they are combined and positioned as shown in the right hand figure.
- Check the lever (6 - 51) to insure that it is provided with a proper friction by the leaf spring (6 - 53).
- Note that if friction of the lever (6 - 51) is insufficient, the sprocket will rotate reversely as the film advance lever is wound up little by little (so called inching) and the shutter blinds will return greatly.
- Note that if friction of the lever (6 - 51) is excessive, the film advance lever will not be turned smoothly.

b. Installation of gear assembly (6 - 47) for controlling position of film perforation.

- Combine the take - up spindle assembly (6 - 74), sprocket (6 - 79) and lever assembly (6 - 69) in their positions shown in the right hand figure, and install the gear assembly (6 - 47).

  NOTE: Be sure to install the gear assembly (6 - 47) at the position where the sprocket shaft assembly (6 - 80), gear (6 - 83) and pin (6 - 81) are engaged mutually.

- After installing the base plate assembly (6 - 2), check the sprocket to insure a tooth of the sprocket is in the position 6° from the camera body center line. To be more specific, apply a torque to the sprocket with a finger lightly toward film rewinding direction, wind up the film advance lever, and make sure that a tooth of the sprocket is positioned as shown in the right hand figure.
  Position of sprocket tooth can also be checked by observing sprocket shaft (6 - 82). To be more specific, one end of the sprocket shaft (6 - 82) is cut by a milling machine to install the gear (6 - 54).
  Position of sprocket tooth is correct when the flat surface of the sprocket shaft end is in right angle against the camera body center line once every three strokes of film winding.

Fig. 14

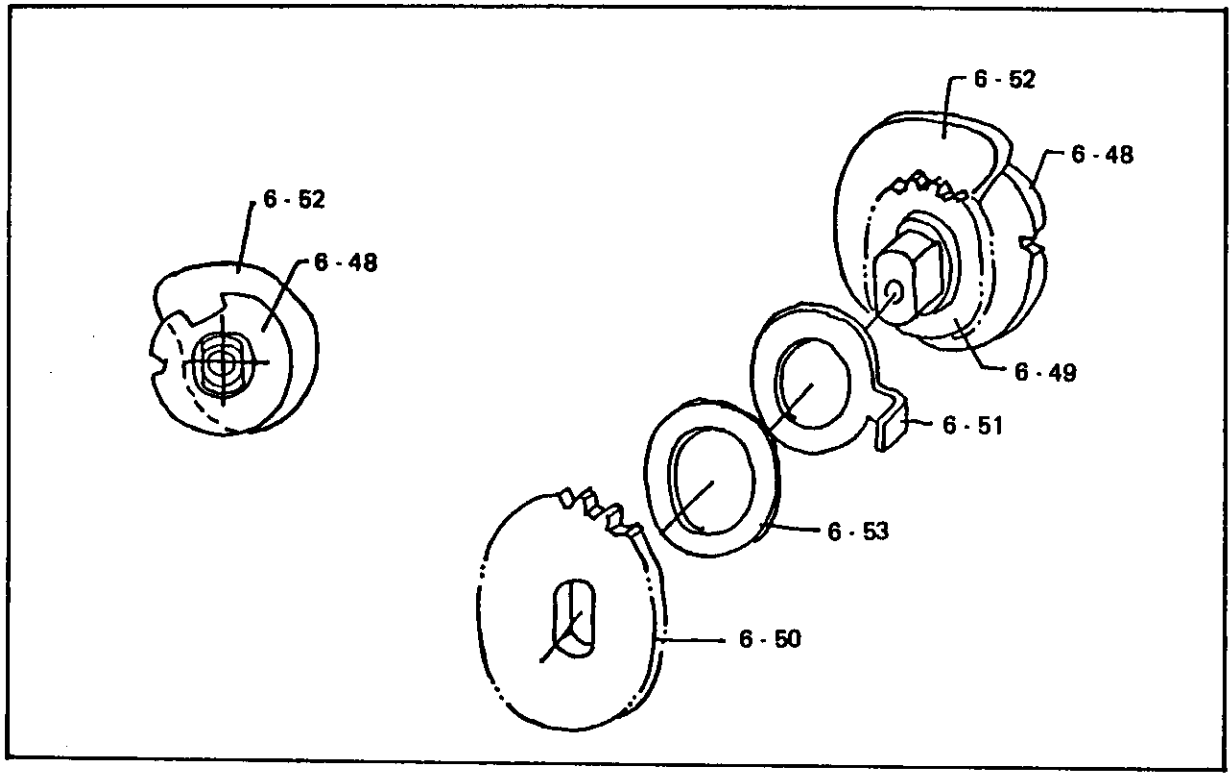
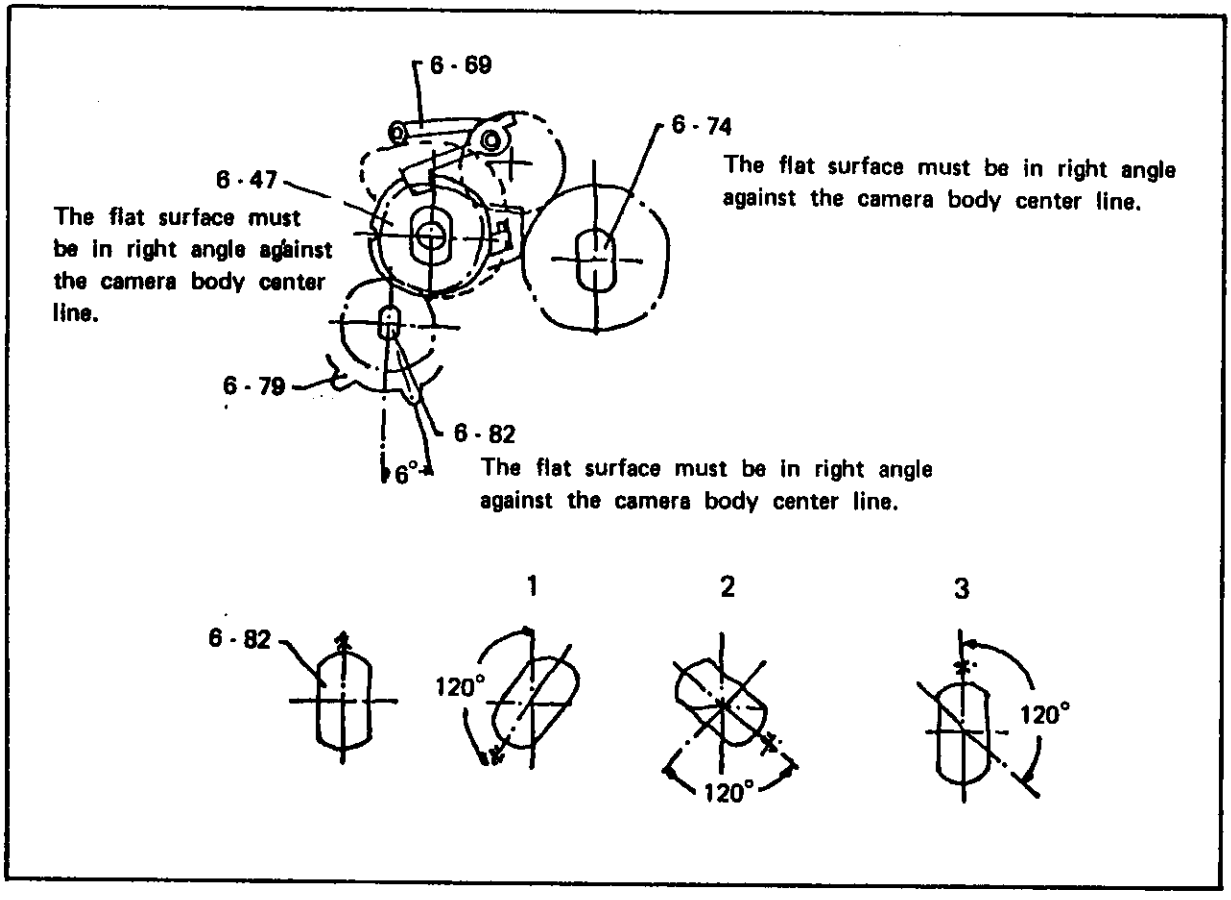

6-52
6-48
6-52
6-48
6-49
6-51
6-53
6-50

Fig. 15


6-69
6-74
6-47
The flat surface must be in right angle against the camera body center line.
The flat surface must be in right angle against the camera body center line.
6-79
6-82
6°
The flat surface must be in right angle against the camera body center line.
1
2
3
6-82
120°
120°
120°

1-9 Installing charge lever assembly (6-40)

a. Apply Helicolube-Molycote mixed grease to the shaft portion.

b. Move the sprocket to set the cam to the position shown in the right hand figure.

c. Install the charge lever assembly (6-40).

d. Move the sprocket and move the gear assembly (6-47) until it stops.

1-10 Installing ratchet wheel assembly (6-37)

a. Apply Helicolube-Molycote mixed grease to the shaft and gear portions.

b. Install the ratchet wheel assembly (6-37) so that the marking hole is positioned in the side as shown in the right hand figure.

1-11 Installing release lever (6-55)

a. Install the release lever (6-55) in the position shown in the right hand figure.

b. Note that this lever is required to release the rewind lock not from the film advance lever side but from an Auto-Winder combined with the camera.

Fig. 16

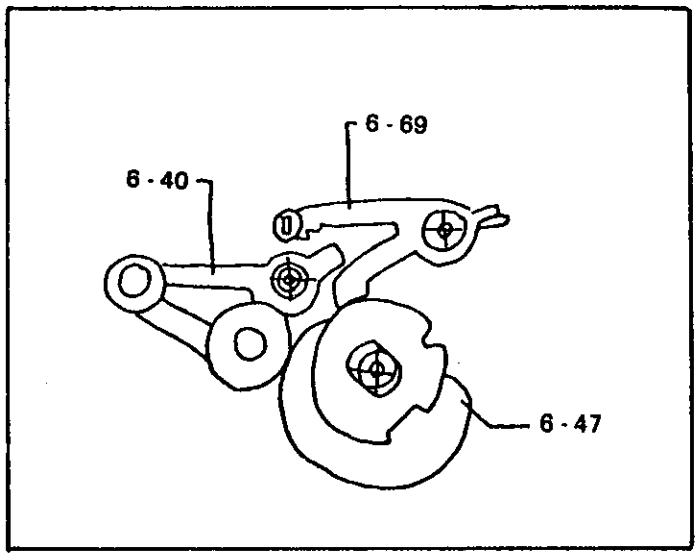
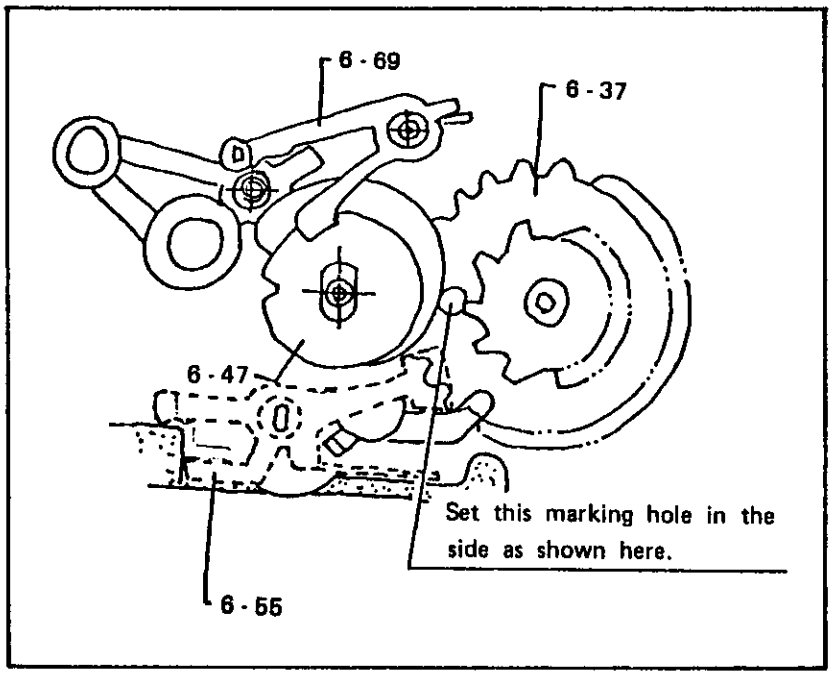

6-69
6-40
6-47

Fig. 17


6-69
6-37
6-47
Set this marking hole in the side as shown here.
6-55

1 - 12 Installing base plate assembly (6 - 2)

a. Apply Helicolube - Molycote mixed grease to the shaft holder portions of the base plate assembly.

b. Exercise care for positions of the ratchet wheel assembly (6 - 37), lever assembly (6 - 69) and charge lever assembly (6 - 40).

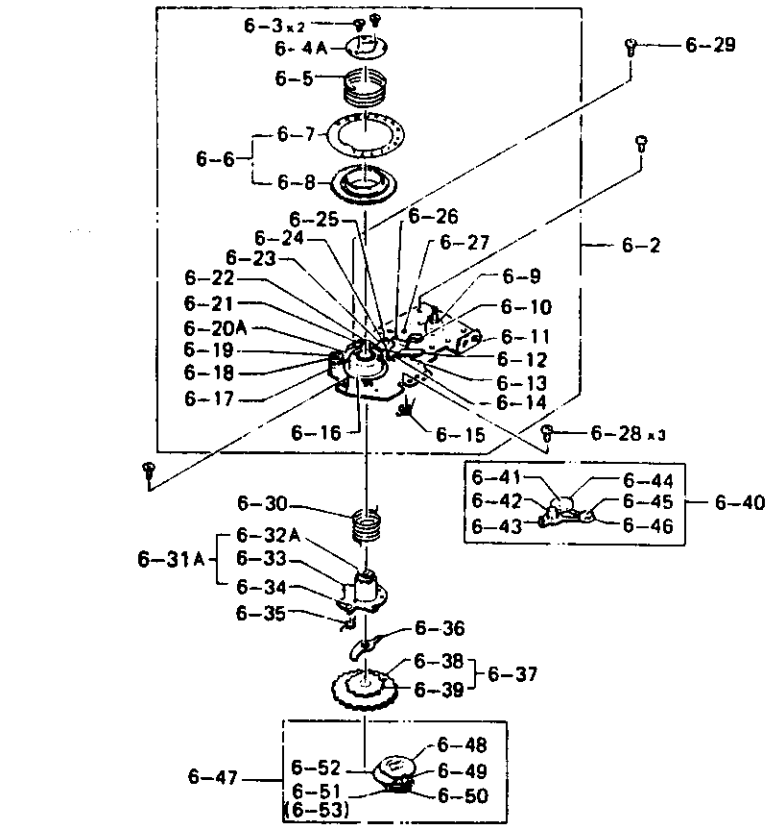
c. Combine the lever (6 - 36), spring (6 - 35) and ratchet wheel (6 - 39) so that the lever is caused to engage with the detent of the ratchet wheel by the spring.

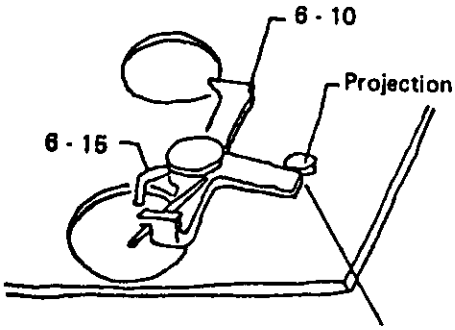
d. Make sure that the lever (6 - 10) is away from the stopper (6 - 48).

e. Matching the shaft holder portions, install the base plate assembly (6 - 2) with three screws (6 - 28) and screw (6 - 29).

f. Release the lever (6 - 10) to the position where it comes into contact with the stopper (6 - 48).

Fig. 18





Install the lever (6 · 10) with the lever hooked on the projection, and release the lever from the projection when the relative parts are installed completely.

1 - 13 Assembling base plate assembly (6 - 2)

a. Check the shaft holder (6 - 16) to insure that it is cauled in the position shown in the right hand figure against the base plate (6 - 11).

b. Check the gears (6 - 21 and 6 - 24) to insure that they are installed respectively on the shafts (6 - 22 and 6 - 25) correctly and they rotate smoothly.

c. Installing gear assembly (6 - 6)

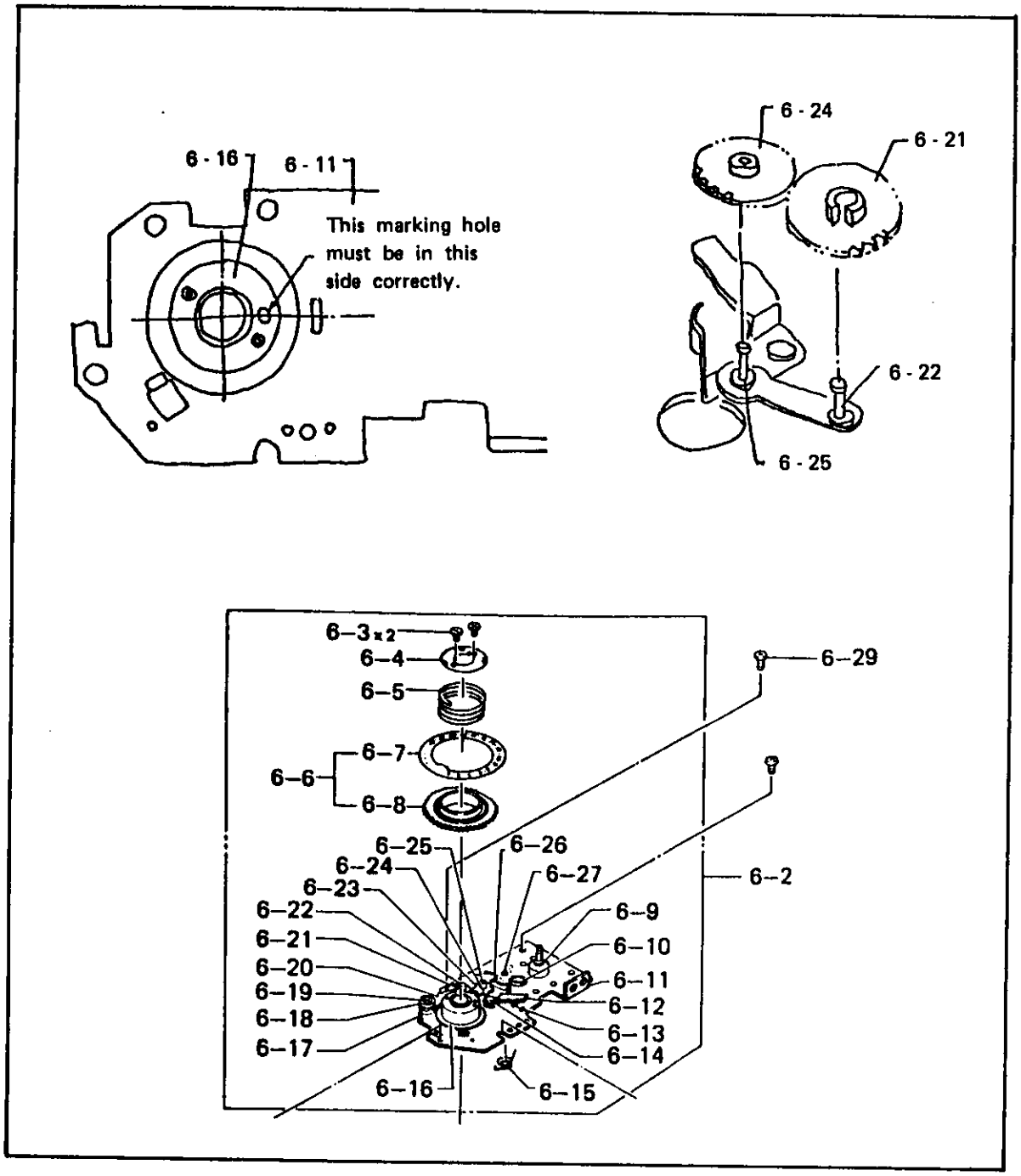
- Place the spring (6 - 5) in the opening of the gear assembly (6 - 6).
- Match the projection (stopper portion) of the gear assembly (6 - 6) to the projection of the base plate (6 - 11).
- Apply one end of the spring (6 - 5) to the hole on the holder (6 - 4).
- Turn the holder (6 - 4) and match the small hole on the holder with the hole of the shaft holder (6 - 16).

  NOTE: Before installing the holder (6 - 4), carefully examine which surface is the top.

- After installing the holder (6 - 4), make sure that the gear assembly (6 - 6) resets smoothly.

  NOTE: The gear assembly will not reset smoothly if the spring (6 - 5) is tangled.

Fig. 19


6-16
6-11
This marking hole must be in this side correctly.
6-24
6-21
6-22
6-25
6-3x2
6-4
6-5
6-6
6-7
6-8
6-29
6-25
6-26
6-24
6-27
6-23
6-2
6-22
6-9
6-21
6-10
6-20
6-11
6-19
6-12
6-18
6-13
6-17
6-14
6-16
6-15

d. Installing square hole plate assembly (6 - 31)

- Apply Helicolube - Molycote mixed grease to the spring (6 - 30).
- Hook the longer arm of the spring (6 - 30) on the hole of the shaft holder (6 - 16).
- Select one out of three holes on the square hole plate assembly (6 - 31) and decide the force of resetting.
- Setting it on the stopper, turn the spring about 120° to provide the spring with a proper spring force.
- Match the plate (1 - 50) to the position shown in the right hand figure from the exposure counter dial side, and install it with the screw temporarily.
- Keep stopping the lever (6 - 10) with the leg portion of the base (2 - 58).
- Match the projection of the gear (6 - 8) with the notch of the dial plate (6 - 7), and install the dial plate (6 - 7) with Pliobond.

Fig. 20

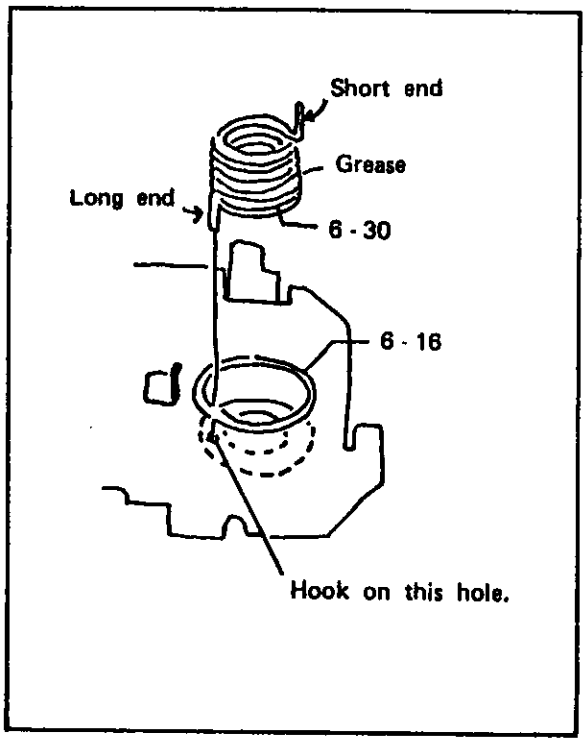


Fig. 21

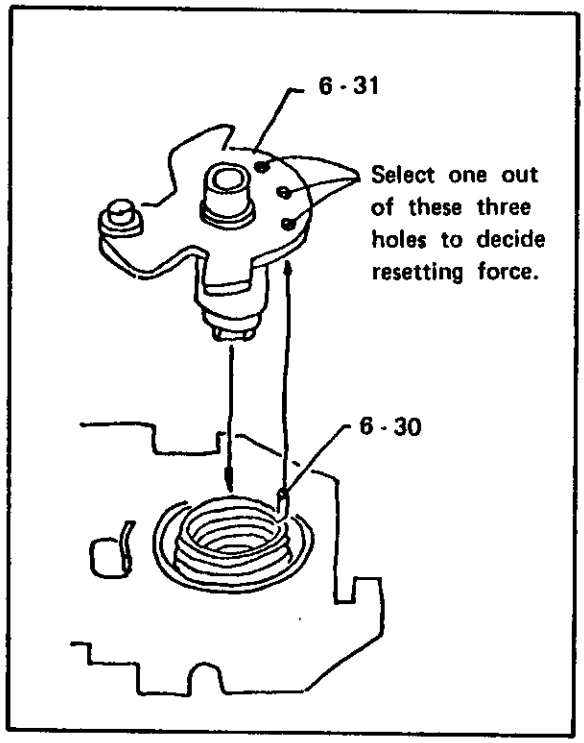


Fig. 22

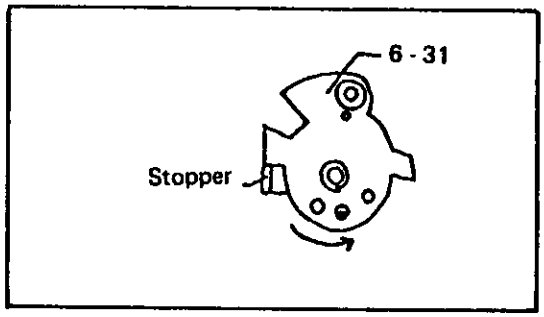


Fig. 23

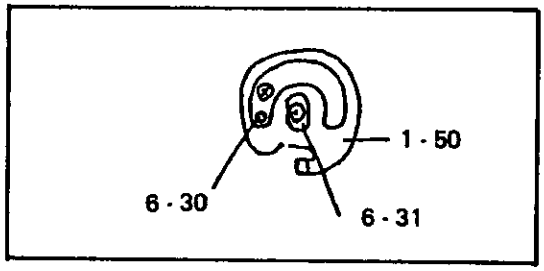
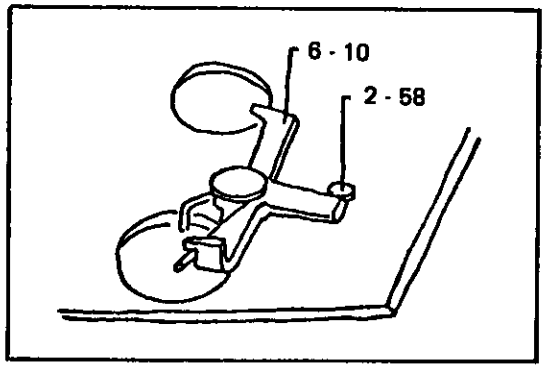


Fig. 24



1-14 Installing gear (6-54) and lever (6-20)

a. Check the lever (6-20) to insure that it is positioned against the gear (6-21) as shown in the right hand figure.

b. Hook the spring (6-17) on the position shown in the right hand figure.

c. Check the gear (6-21) to insure that it engages with the gear (6-8) when the bent portion of the lever (6-20) is pushed by the film chamber door.

d. Installing gear (6-54)

- With the shutter charged (with the film advance lever wound up completely), set the gear (6-21) in the position shown in the right hand figure.
- Install the gear (6-54) on the sprocket shaft (6-82).

NOTE: The engaging groove (engagement between the sprocket gear and sprocket shaft) is equally divided into three sections. For this reason, if the gear (6-21) is not positioned as shown in the right hand figure, the feeding notch of the gear (6-21) engages with the gear (6-8), causing the dial plate to indicate wrong exposure number.

e. The gear (6-21) turns 360° per frame.

Fig. 25

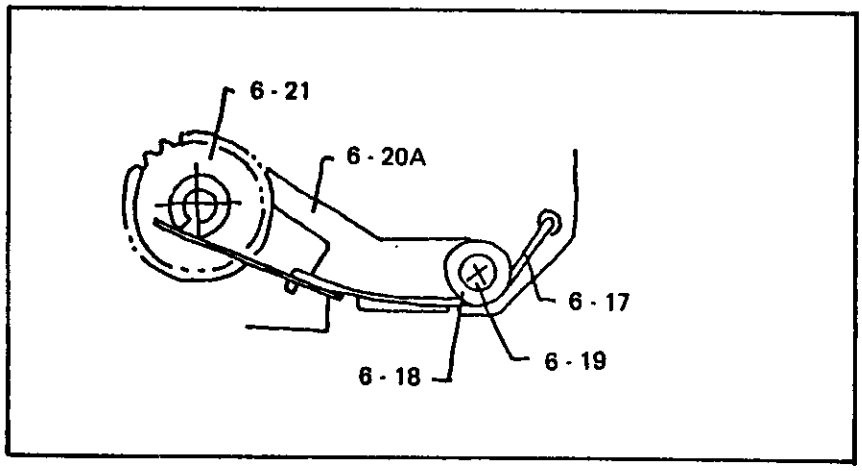


Fig. 26

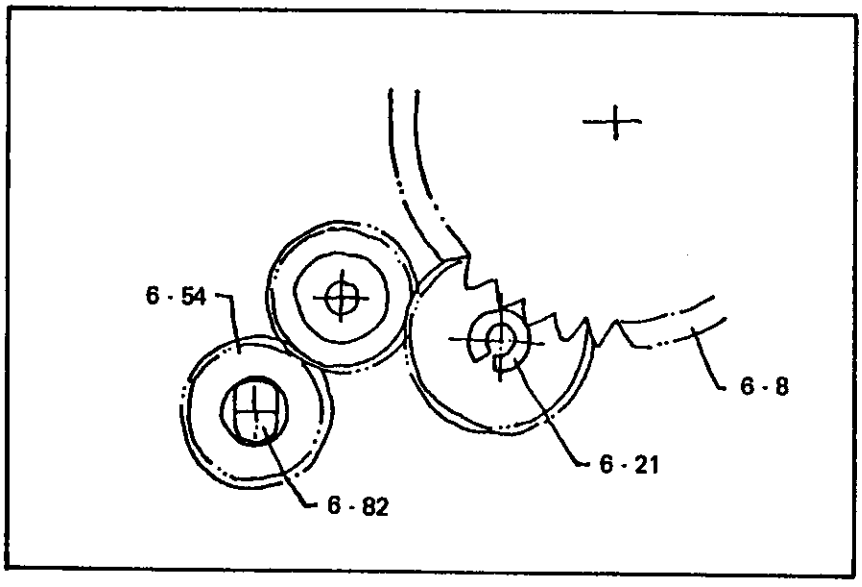


Fig. 27

The gear (6-21) must positioned in the above shown three positions even if the film is rewound.

1-15 Charge lever assembly (6-40)

a. Check the rollers (6-44 and 6-46) to insure that they have been securely caulked.

b. Make sure that the shafts (6-41 and 6-45) are not loose. If these shafts are loose, the quick return mechanism will not be set correctly.

1-16 Installing light shielding plates (6-97 and 6-98)

- Install the light shielding plates (6-97 and 6-98) correctly and firmly with Pliobond.

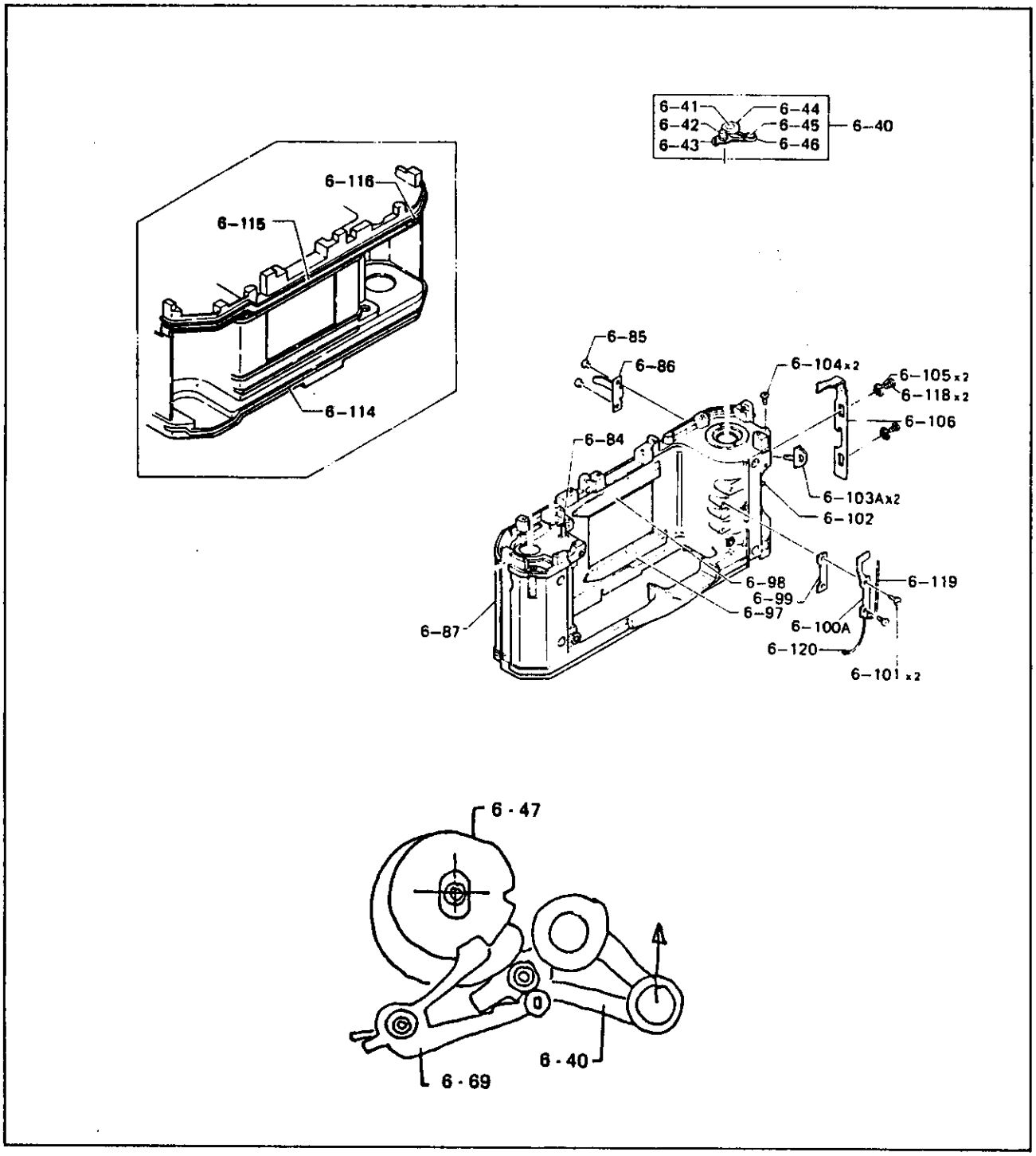
1-17 Installing moquettes (6-14, 6-115 and 6-116)

- Install these moquettes correctly and firmly in their positions with Pliobond.

1-18 Checking film advance lever motion

Depress the charge lever assembly (6-40) to disengage the lever assembly (6-69) from the stopper (6-48), and make sure that the film advance lever can be turned.

Fig. 28


6-41
6-42
6-43
6-44
6-45
6-46
6-40
6-116
6-115
6-114
6-85
6-86
6-104x2
6-105x2
6-118x2
6-106
6-84
6-103Ax2
6-102
6-98
6-99
6-97
6-119
6-100A
6-120
6-101x2
6-87
6·47
6·40
6·69

2. Film chamber door assembly (3-1)

2-1 Installing pin (3-9) and moving pin (3-12)

a. Install the pin (3-9) with Araldite.

b. Apply the spring (3-11) and moving pin (3-12), and install the moving pin (3-12) stationarily with the screw (3-8).

NOTE: Check the moving pin (3-12) to insure that it moves smoothly.

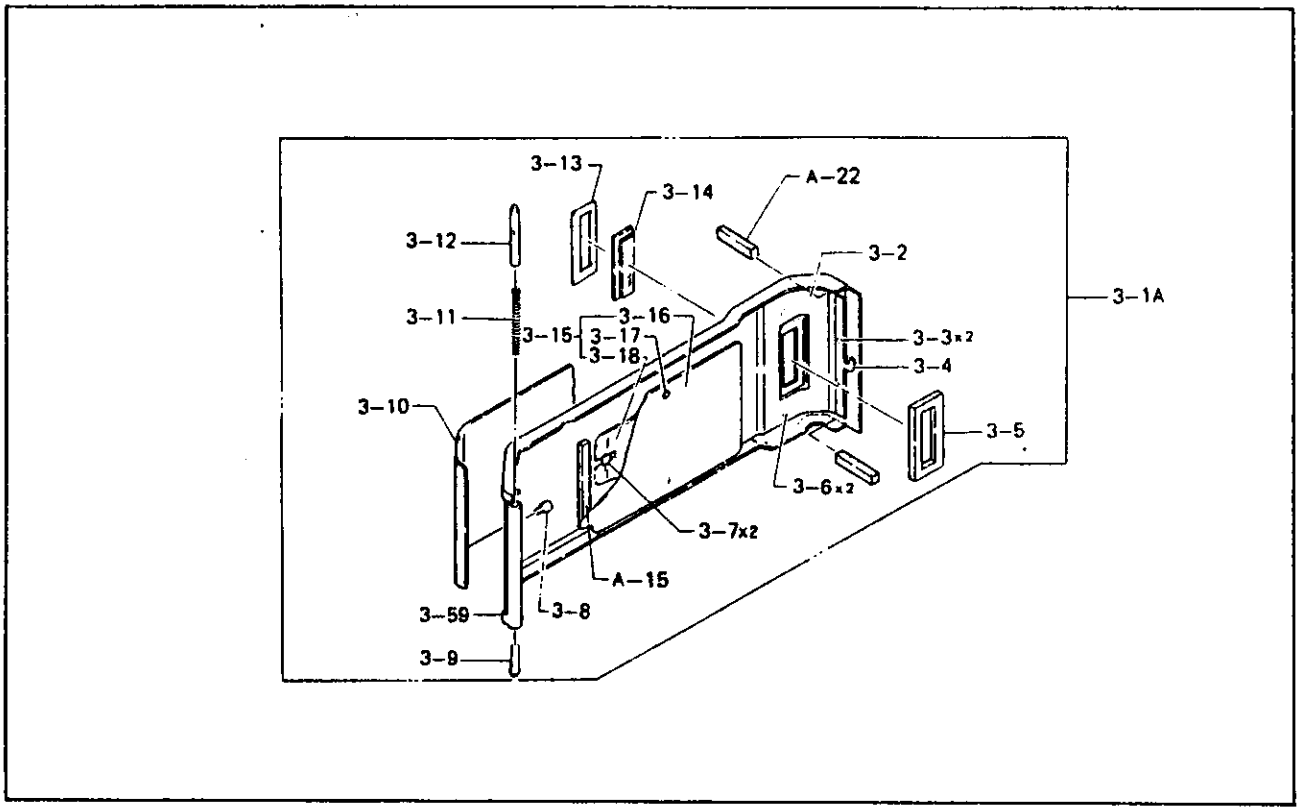
2-2 Pressure plate assembly (3-15)

a. Examine the pressure plate (3-16) and leaf spring (3-18) for their caulking direction.

b. If direction of the leaf spring (3-18) is reversed 180°, the pressure plate will come into contact with the sprocket during opening and closing of the film chamber door, generating a clattering sound.

c. Check the pressure plate (3-16) to insure that it is not scarred or scratched. A scar or scratch will damage film.

Fig. 29


3-13
3-14
A-22
3-12
3-2
3-1A
3-11
3-16
3-15
3-17
3-18
3-3x2
3-4
3-10
3-5
3-6x2
3-7x2
A-15
3-59
3-8
3-9

3. Focal plane shutter assembly (5 - 20)

a. Place the focal plane shutter assembly (5 - 20) into the camera body from the bottom of the camera body.

NOTE: Be careful not to raise the light shielding plate (6 - 98).

b. Install the focal plane shutter assembly with three screws (5 - 72).

c. With care exercised on the direction of the notch, install the notched gear (5 - 67).

d. Combine the collar (5 - 68) with the seat plate (5 - 69), and install them with the clutch (5 - 70) tightly on the focal plane shutter assembly.

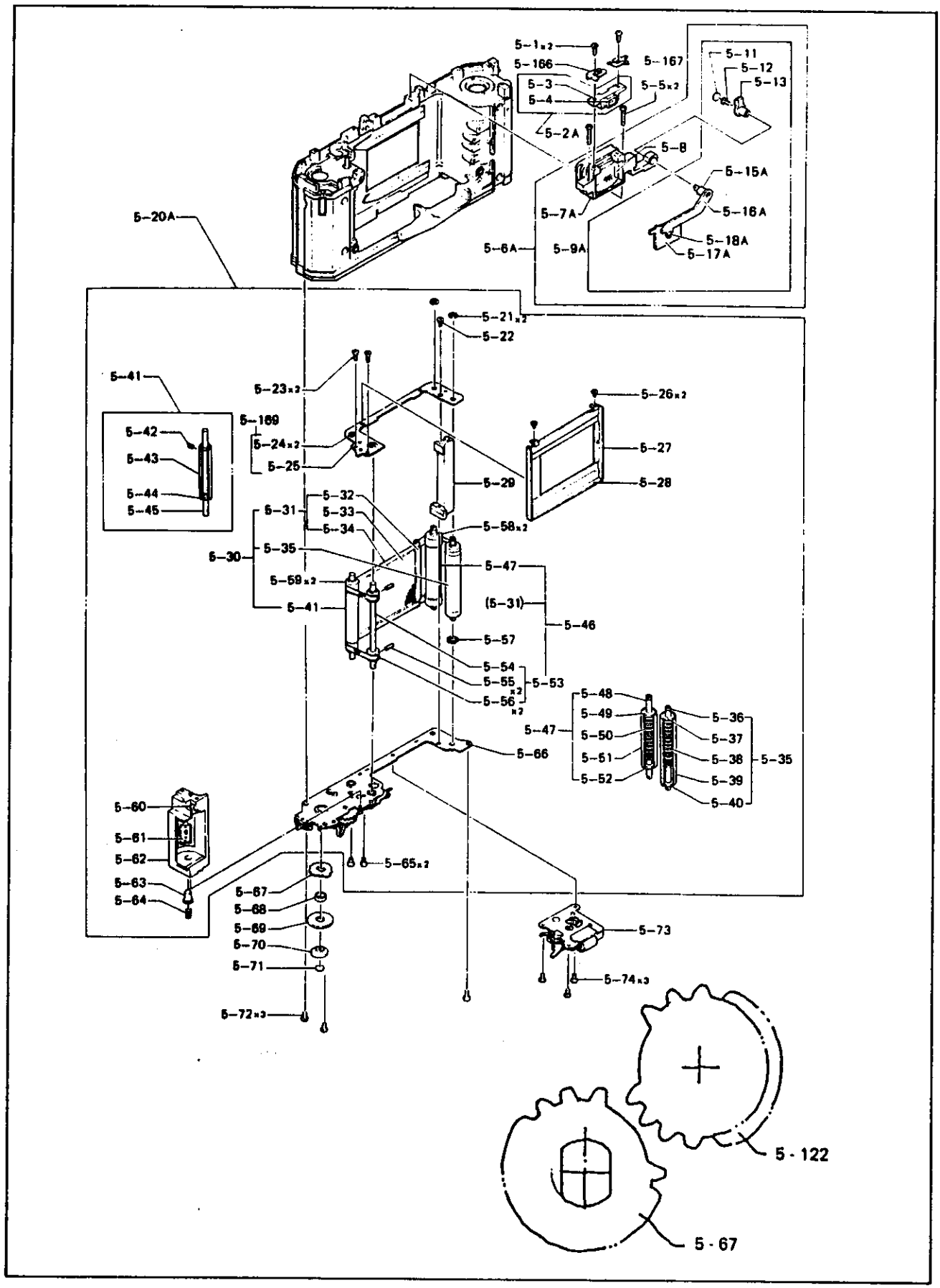
e. Install the cover plate (5 - 71) with Pliobond.

NOTE: When loosening the clutch (5 - 70), wind up the film advance lever in a half way, hold the sprocket, and loosen the clutch.
If the clutch is loosened without winding the film advance lever in a half way, the claw portion of the lever (6 - 51) may be damaged.

f. Release the charge lever assembly (6 - 40), wind up the film advance lever, and make sure that the shutter blinds are wound up.

g. When the shutter blinds are wound up completely, make sure that the notched gear (5 - 67) disengages permitting the shutter blinds to return the original positions.

Fig. 30


5-1 x2
5-166
5-167
5-11
5-12
5-13
5-3
5-4
5-5 x2
5-2A
5-8
5-15A
5-16A
5-7A
5-18A
5-17A
5-6A
5-9A
5-20A
5-21 x2
5-22
5-41
5-23 x2
5-26 x2
5-169
5-42
5-24 x2
5-27
5-43
5-25
5-29
5-28
5-44
5-45
5-32
5-31
5-33
5-34
5-58 x2
5-30
5-35
5-47
5-59 x2
(5-31)
5-41
5-46
5-57
5-54
5-55 x2
5-53
5-56 x2
5-48
5-49
5-36
5-47
5-50
5-37
5-51
5-38
5-35
5-52
5-39
5-40
5-66
5-60
5-61
5-62
5-65 x2
5-63
5-64
5-67
5-68
5-69
5-70
5-71
5-73
5-74 x3
5-72 x3
5-122
5-67

4. Assembling focal plane shutter assembly (5 - 20)

a. Combine the battery compartment (5 - 62), contact piece (5 - 60), contact point (5 - 63) and spring (5 - 64), and install them on the base plate (5 - 66) with two screws (5 - 65).

b. Install the column (5 - 29) on the base plate (5 - 66) with the screw (5 - 78).

c. Combine the 2nd shutter blind assembly (5 - 30) and 1st shutter blind assembly (5 - 46) with two large rollers (5 - 58), two small rollers (5 - 59) and washer (5 - 57) as shown in the right hand figure, and fit them on the shaft holder on the base plate (5 - 66).

d. Match the base plate (5 - 25) to the shutter blind spindles, and install the base plate with two screws (5 - 23) and screw (5 - 22).

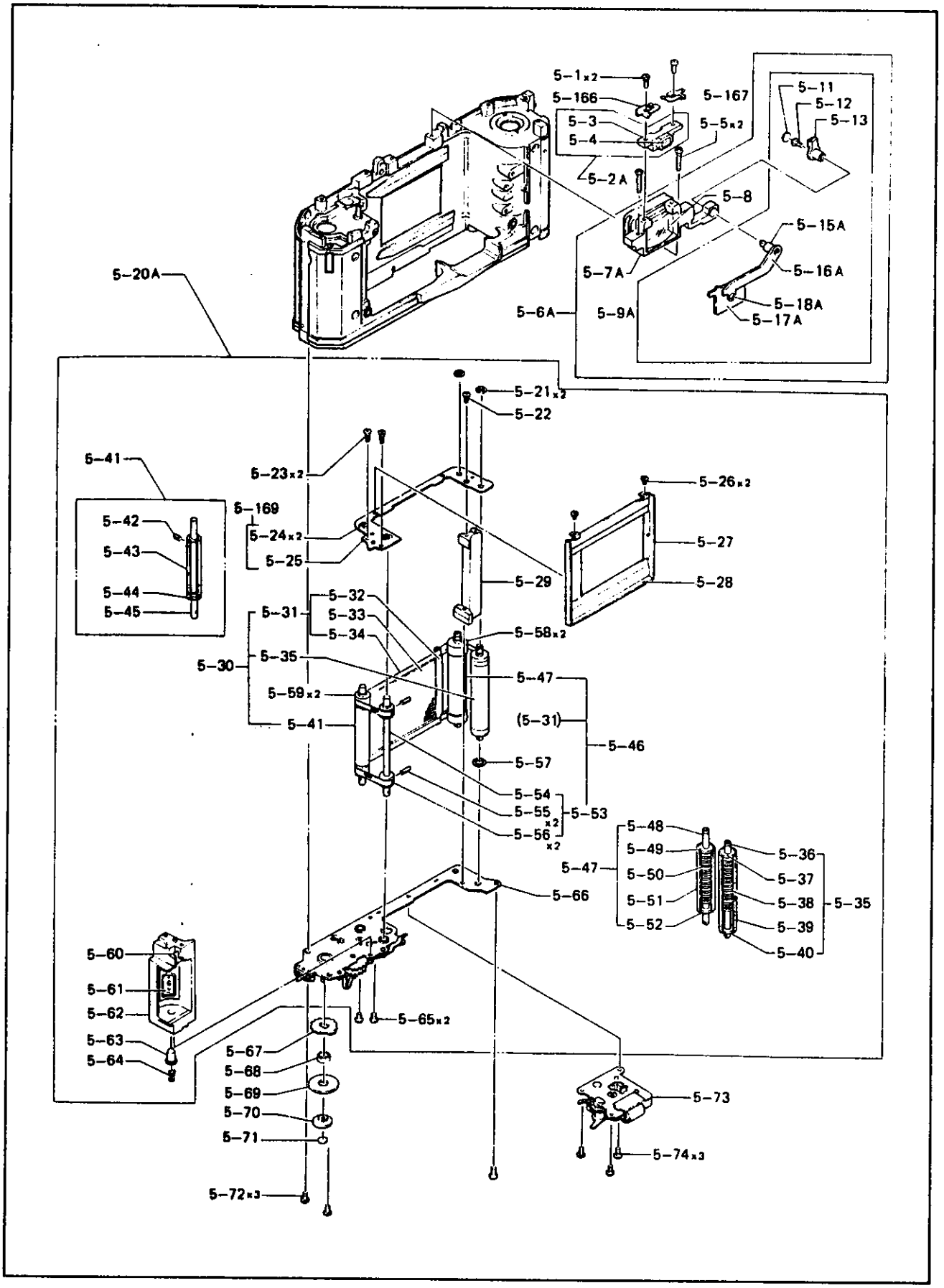
e. Install two E - clips (5 - 76) and two E - clips (5 - 21) on the shutter blind spindles.

f. Install the light shielding plate (5 - 27) with two screws (5 - 26).

NOTE: Be careful not to allow the light shielding plate (5 - 27) coming into contact with the metal fixture (5 - 32).
If it drags, shutter blind velocity will fluctuate.

g. Install the moquette (5 - 28) with Pliobond.

Fig. 31


5-1 x2
5-166
5-167
5-3
5-4
5-5 x2
5-2A
5-11
5-12
5-13
5-8
5-15A
5-16A
5-18A
5-17A
5-7A
5-6A
5-9A
5-20A
5-21 x2
5-22
5-41
5-23 x2
5-26 x2
5-169
5-42
5-24 x2
5-25
5-27
5-43
5-29
5-28
5-44
5-45
5-32
5-31
5-33
5-34
5-58 x2
5-30
5-35
5-47
5-59 x2
(5-31)
5-41
5-46
5-57
5-54
5-55 x2
5-56 x2
5-53
5-48
5-49
5-47
5-50
5-36
5-37
5-51
5-38
5-35
5-52
5-39
5-40
5-66
5-60
5-61
5-62
5-63
5-64
5-65 x2
5-67
5-68
5-69
5-70
5-71
5-72 x3
5-73
5-74 x3

h. Install two gears (5 - 101) with two spring pins (5 - 100).

i. Install two ratchet gears (5 - 75) on the shutter blind spindles after applying Pliobond so that they will not be dropped off.

j. Apply the click spring (5 - 79) to the screw (5 - 78), and hold the ratchet geat (5 - 75) with the screw (5 - 78). Now, install the E - clip (5 - 77) to secure the click spring (5 - 79).

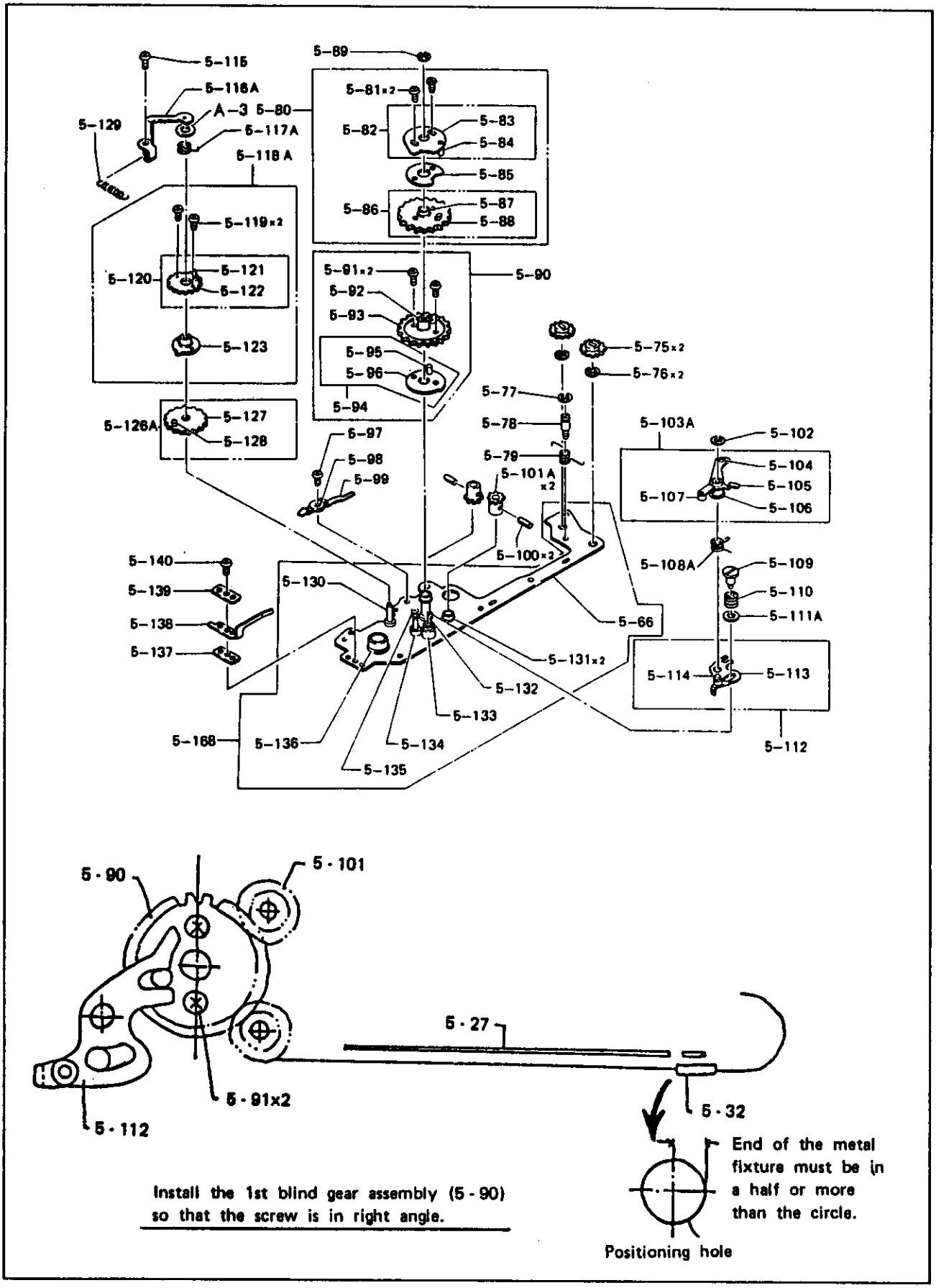
k. Turn the two ratchet gears (5 - 75) counterclockwise to provide the 1st and 2nd shutter blinds with a light tension.

l. With the metal fixture (5 - 32) of the 1st blind matched with the positioning hole of the light shielding plate (5 - 27), hold the gear (5 - 101), and install the 1st shutter blind gear assembly (5 - 90) in the position shown in the right hand figure.

m. Install the stop lever assembly (5 - 112), and apply Helicolube - Molycote mixed grease to the sliding surface and washer (5 - 111).

n. Loosen two screws (5 - 91) and finely adjust position of the metal fixture (5 - 32). When position of the metal fixture is adjusted completely, apply Pliobond to the screws to lock them and retighten the screws securely.

Fig. 32


5-115
5-116A
A-3 5-80
5-117A
5-118A
5-129
5-119×2
5-120
5-121
5-122
5-123
5-126A
5-127
5-128
5-89
5-81×2
5-82
5-83
5-84
5-85
5-86
5-87
5-88
5-91×2
5-92
5-93
5-90
5-95
5-96
5-94
5-97
5-98
5-99
5-77
5-78
5-79
5-101A ×2
5-100×2
5-75×2
5-76×2
5-103A
5-102
5-104
5-105
5-107
5-106
5-108A
5-109
5-110
5-111A
5-114
5-113
5-112
5-140
5-139
5-138
5-137
5-130
5-66
5-131×2
5-132
5-133
5-134
5-135
5-136
5-168
5·90
5·101
5·27
5·91x2
5·112
5·32
End of the metal fixture must be in a half or more than the circle.
Positioning hole
Install the 1st blind gear assembly (5·90) so that the screw is in right angle.

o. Set the gear (5 - 101) stationarily in the position where the metal fixture (5 - 32) of the 2nd blind is matched with the metal fixture of the 1st blind, and install the 2nd shutter blind gear assembly (5 - 80) in the position shown in the right hand figure.

p. Loosen two screws (5 - 81), and finely adjust overlapped positions of the two metal fixtures.
After completing the adjustment, apply Pliobond to the screws (5 - 81) to lock them, and retighten the screws securely.

q. Set the intermediate gear assembly (5 - 126) so that the mark on the intermediate gear is positioned as shown in the right hand figure, and install the clutch gear assembly (5 - 118).

r. Hook the spring (5 - 117) on the position shown in the right hand figure.

s. Check the arm lever (5 - 116) to insure that it does not hold the spring.

NOTE:
- If the arm lever (5 - 116) holds the spring, the clutch gear assembly (5 - 118) does not return smoothly causing traveling velocity of the 1st blind to fluctuate.
- When shape of the arm lever (5 - 116) is improper, tooth position of the clutch gear assembly (5 - 118) will be deviated, causing gear teeth to collide when the film advance lever is wound.
- When winding up film successively, if the gear teeth collide, adjust the arm lever (5 - 116).

Fig. 33

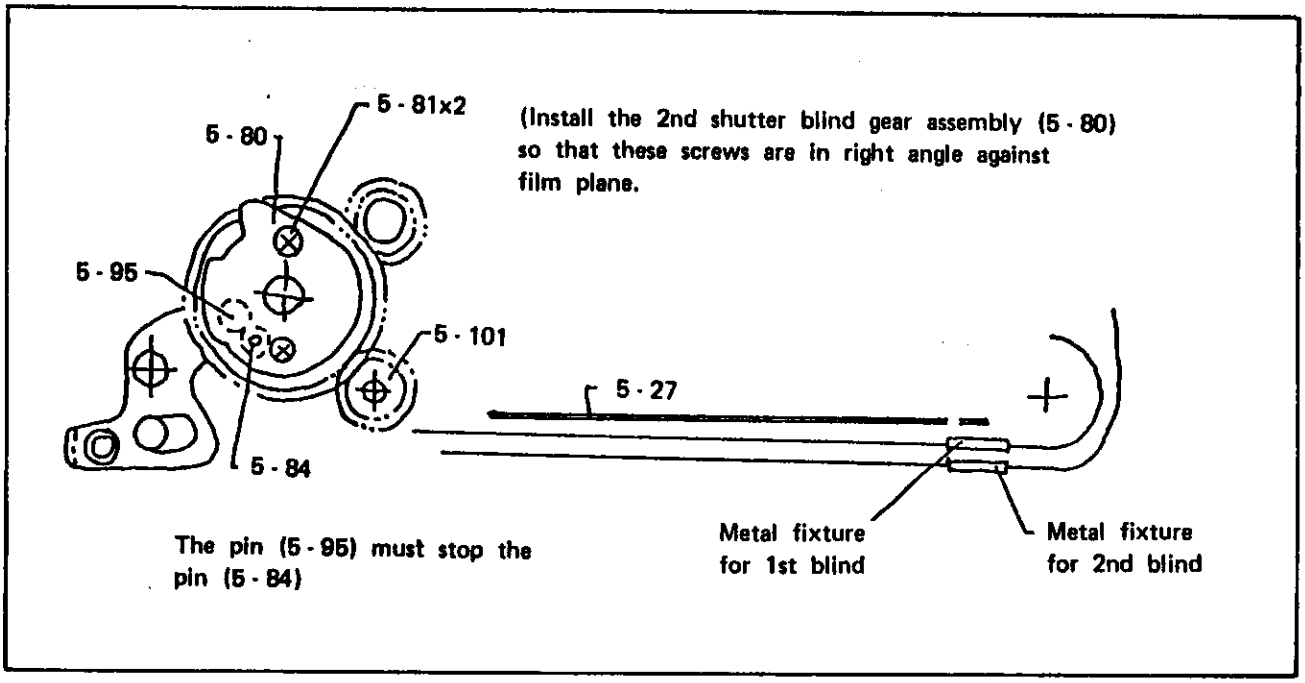
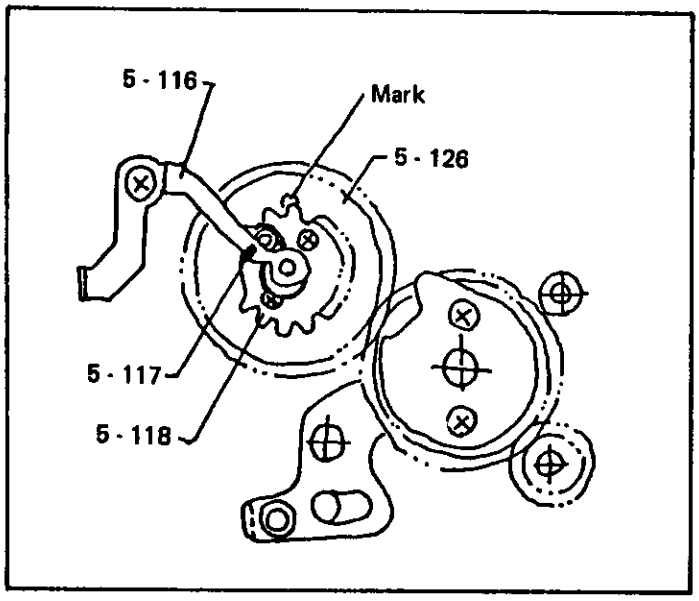

5 - 81x2
5 - 80
(Install the 2nd shutter blind gear assembly (5 - 80) so that these screws are in right angle against film plane.
5 - 95
5 - 101
5 - 27
5 - 84
The pin (5 - 95) must stop the pin (5 - 84)
Metal fixture for 1st blind
Metal fixture for 2nd blind

Fig. 34


5 - 116
Mark
5 - 126
5 - 117
5 - 118

5. Assembling mirror case and relative parts

5-1 Description for operation of quick return mechanism

a. Apply Helicolube - Molycote mixed grease to the shaft portions.

NOTE: Do not apply grease to those levers the plane of which is in contact with the base plate.

b. When the quick return charge lever assembly (4 - 90A) is moved to the arrow mark direction (charged), it is held in the charged position by the lever (4 - 85).

c. Mirror rising operation
When the ML magnet assembly (4 - 77) is demagnetized, the lever (4 - 47A) moves, the spring (4 - 102A) causes the lever (4 - 97B) to move and disengage with the lever (4 - 80B).
Then, the lever (4 - 80B) si moved by the spring (50B2458151), causing the mirror to go up.

Fig. 35

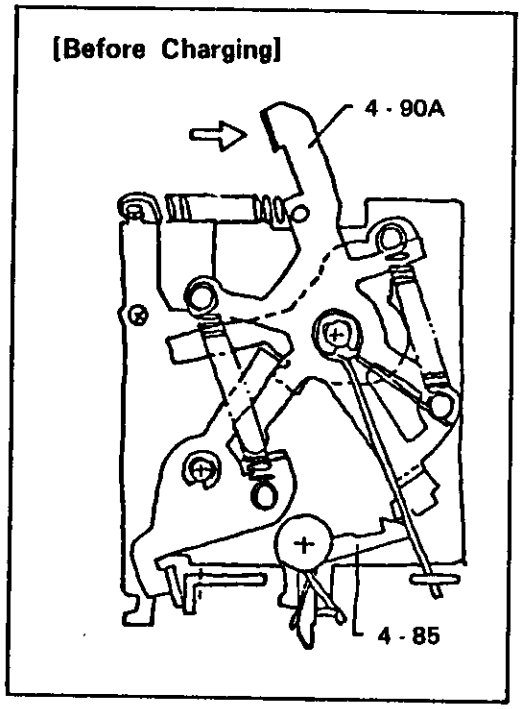


Fig. 36

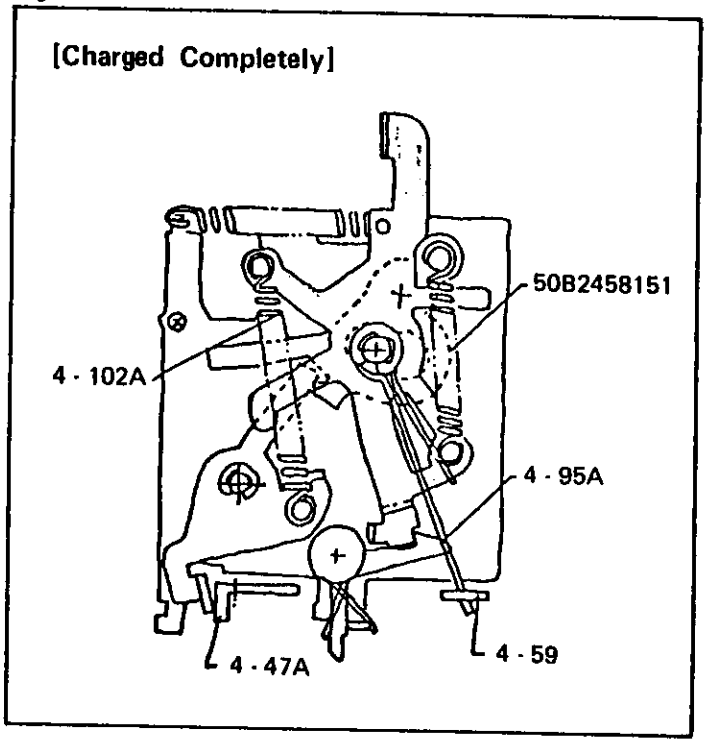
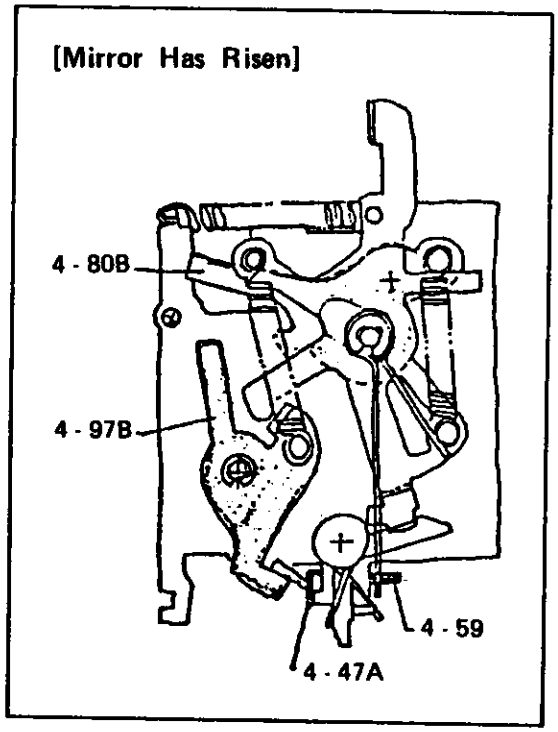


Fig. 37



d. Aperture stop-down mechanism charging operation

- When the quick return charge lever assembly (4-90) is charged, the spring (4-95) causes the lever assembly (4-59) to turn toward direction (A).
- At the same time, the spring (4-102) causes the lever assembly (4-47) to turn toward direction (B).
- The lever assembly (4-59) is stopped by the lever (4-15) (The hook portion indicated as (E)).
- The lever assembly (4-47) is stopped by the lever (4-150) (The hook portion indicated as (C)).
- To the lever (4-15), stopping force is added by the ML magnet assembly (4-65) at the point of pin (4-16).

e. Aperture stopping down operation

- When the ML magnet assembly (4-65) demagnetizes, the force at the pointer where holding force of the ML magnet assembly applied is freed, and magnet disengaging force is enhanced by the spring (4-70), causing disengagement at the hook portion indicated as (E).
- As the lever assembly (4-59) turns, the lever (4-150) is released (kicked at point (D)), and disengagement occurs at the hook portion indicated as (C), causing the lever assembly (4-47) to move.
- Then, the lever (4-56) is pushed by the pin (4-60) of the lever assembly (4-59), causing the lever (4-56) to move toward aperture stopping down direction.
- As the lever assembly (4-47) turns, the lever assembly (4-97) moves and kicks up the mirror.

Fig. 38

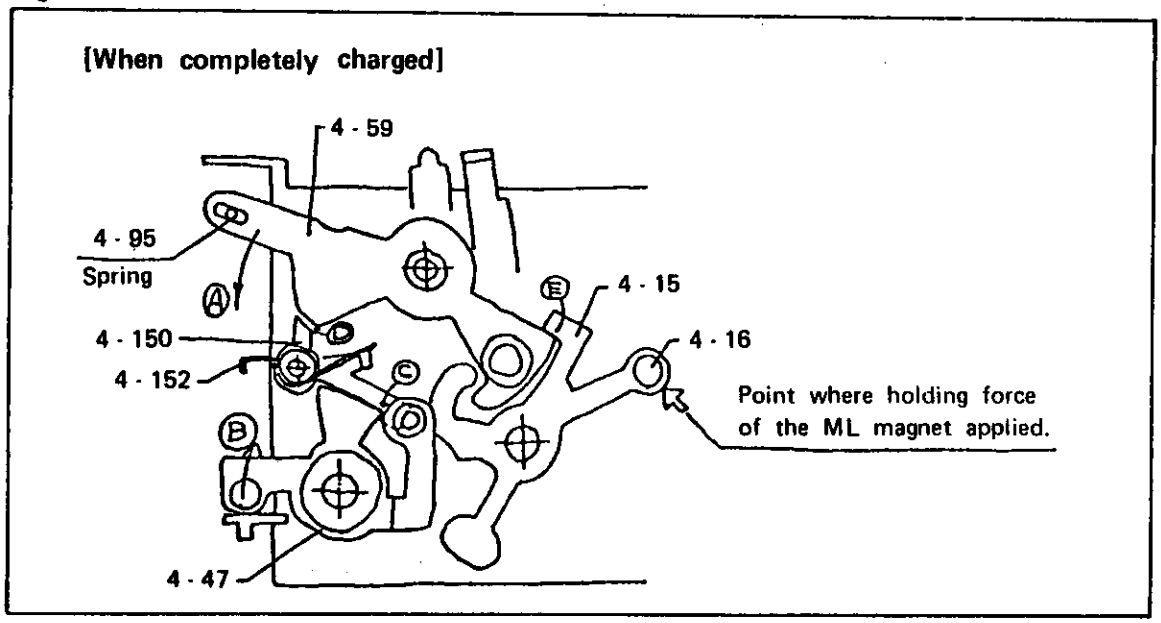


Fig. 39

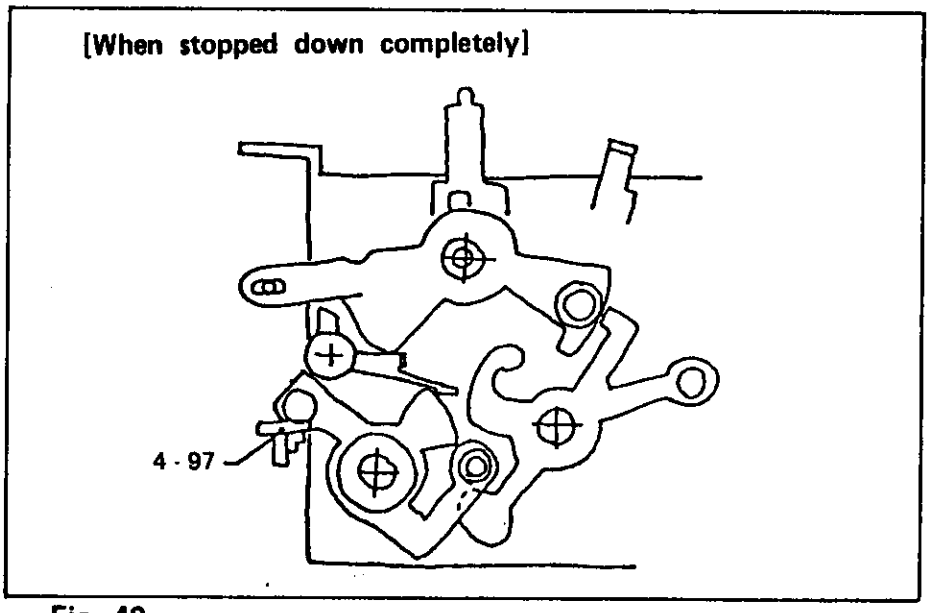


Fig. 40

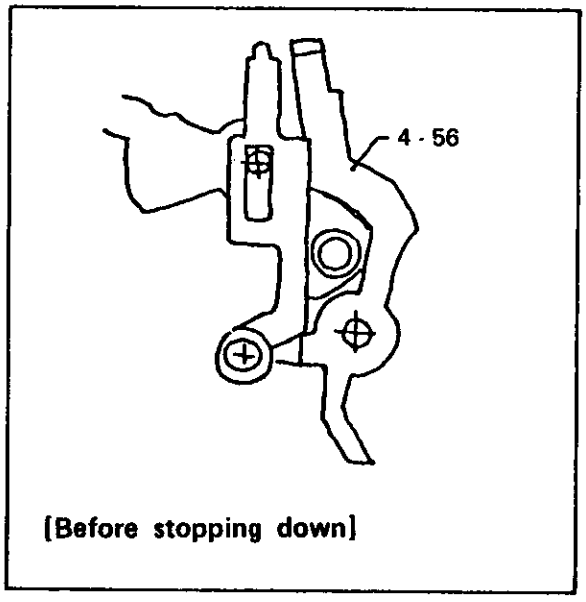
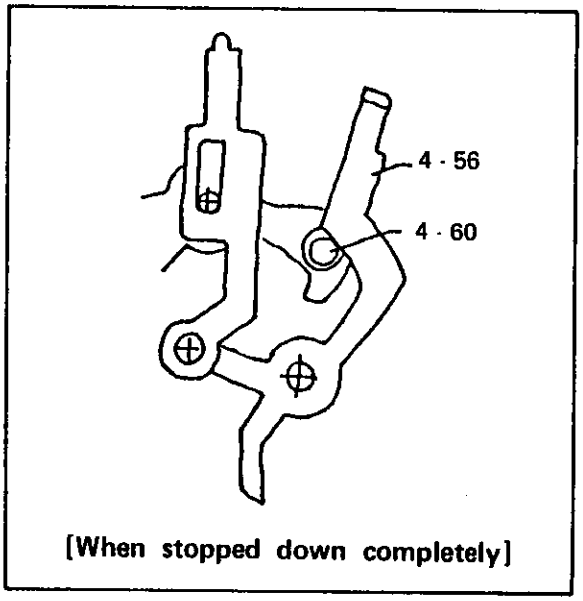


Fig. 41



f. Returning process of the quick return mechanism

- When an exposure is made completely and the 2nd shutter blind completes its travel, the lever (4 - 85) is pushed by the release lever (5 - 99).
- The lever (4 - 85) disengages with the quick return charge lever assembly (4 - 90).
- The spring (4 - 89) causes the quick return charge lever assembly (4 - 90) to return to the original position.
- The attracted surface must come into tight contact even if the quick return charge lever assembly (4 - 90) is returned gently.

5 - 2 Installing ML magnet assembly (4 - 65)

- Charge the quick return charge lever assembly (4 - 90) without installing the ML magnet assembly.
- When the quick return charge lever assembly cannot be charged, thoroughly clean the hook portion of the lever (4 - 15).
- Position and install the pin (4 - 16) and lever (4 - 74) of the ML magnet assembly as shown in the right hand figure.
- Apply the spring (4 - 63) as shown in the right hand figure.

Fig. 42

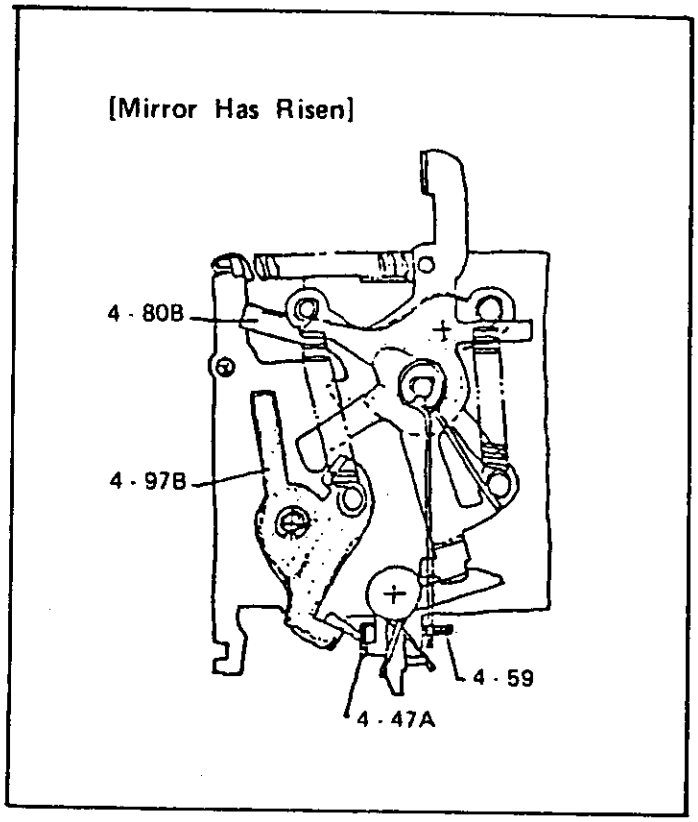
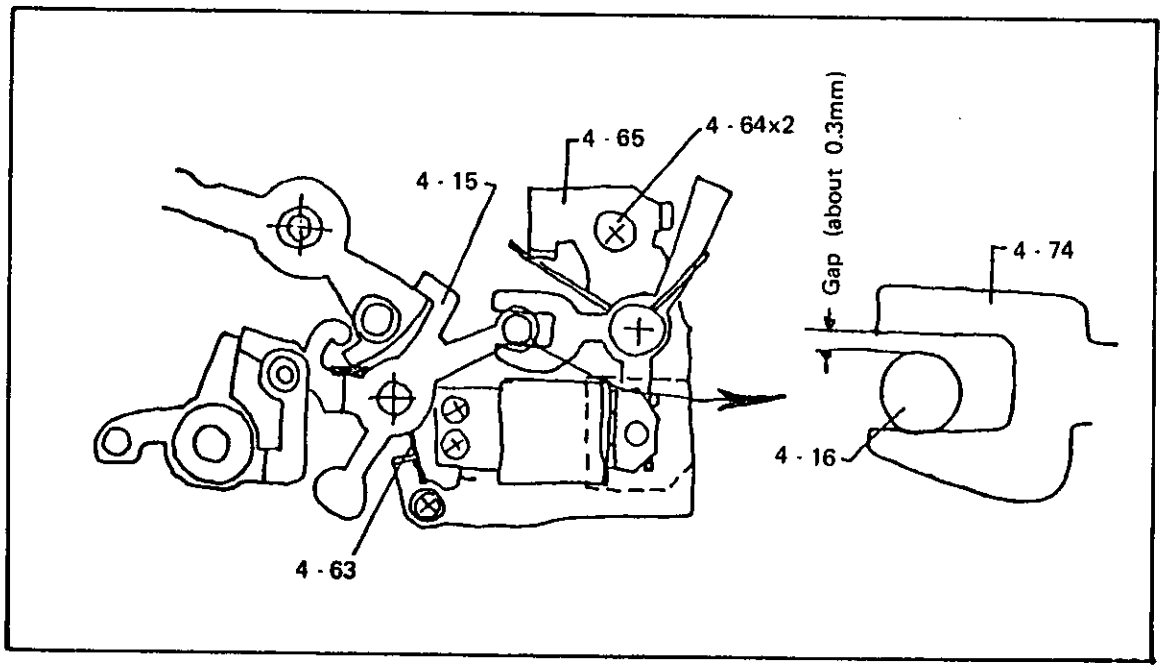

[Mirror Has Risen]
4 - 80B
4 - 97B
4 - 59
4 - 47A

Fig. 43


4 - 65
4 - 64x2
4 - 15
Gap (about 0.3mm)
4 - 74
4 - 16
4 - 63

- Apply DC 2.5V across lead wires (blue (—) and orange (+)) of the ML magnet assembly (4-65), and make sure that the mirror rises.
- With the pin (4-16) held with a screw driver, wind up the film advance lever. Now, move the screw driver away from the pin slowly, and make sure that a gap is left between the pin and lever.
  (Without this gap, the shutter will not be released sometimes.)
- When a gap exists but the shutter is not released.
  - The magnet coil is broken.
  - Strengthen the spring (4-70).

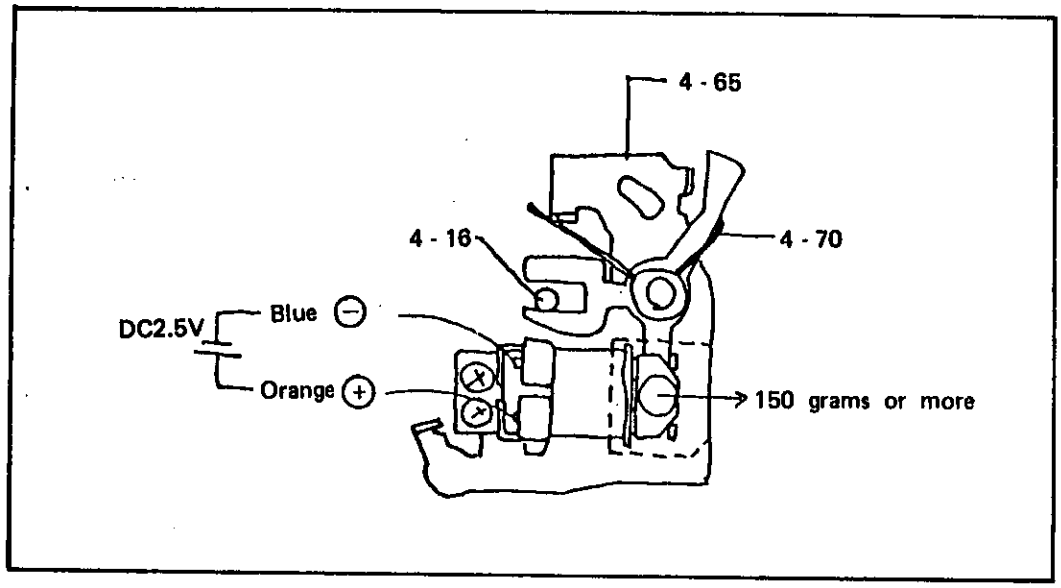
5-3 ML magnet assembly (4-65)

- Specifications

DC resistance of coil:	120 ohms
Attracting force:	150 grams or more (at the attracted piece supporting shaft with the spring unhooked)
Operating voltage:	DC 2.5V (Should be separated by the spring)

- Attracting force will reduce if any dust is between the iron core and attracted piece.
- Exercise care for polarity (positive and negative terminals of the coil).

Fig. 44



5-4 Magnet assembly (5-73) (α and β magnets) releasing mechanism

- When the quick return mechanism operates, the lever assembly (4-47) operates, and the pin (4-48) releases the release lever (5-163) of the magnet assembly (5-73).
- When the lever assembly (4-47) is deformed and the film advance lever is wound up, the release lever (5-163) is pushed.
  With the release lever (5-163) pushed, first blind holding force becomes insufficient causing the first shutter blind to run alone as soon as the shutter is charged.

Fig. 45

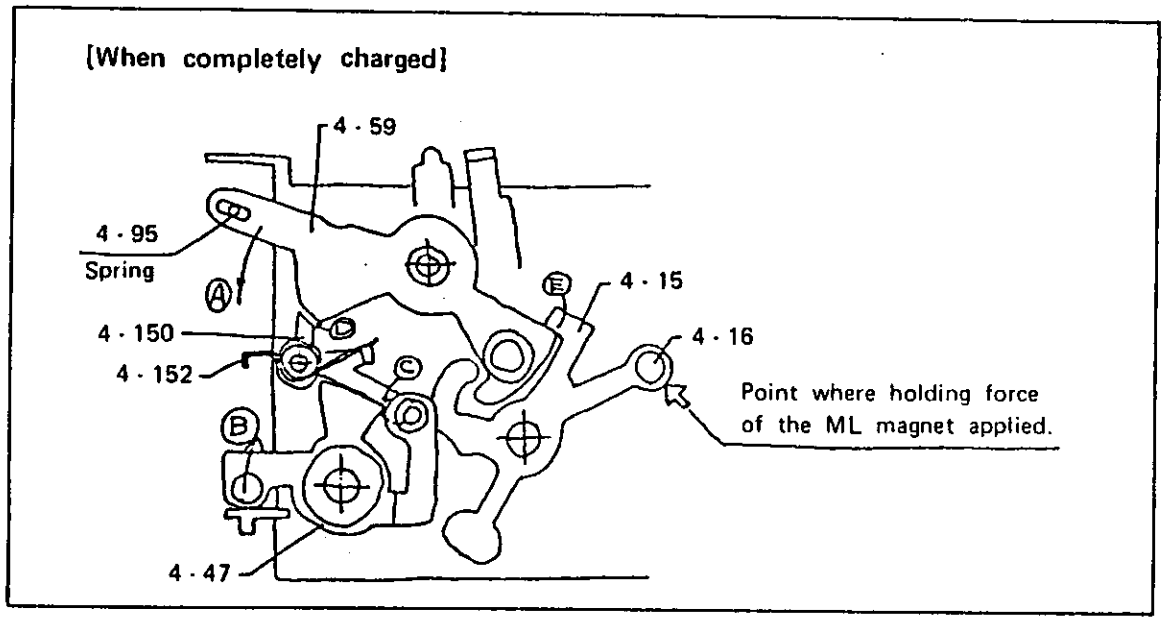
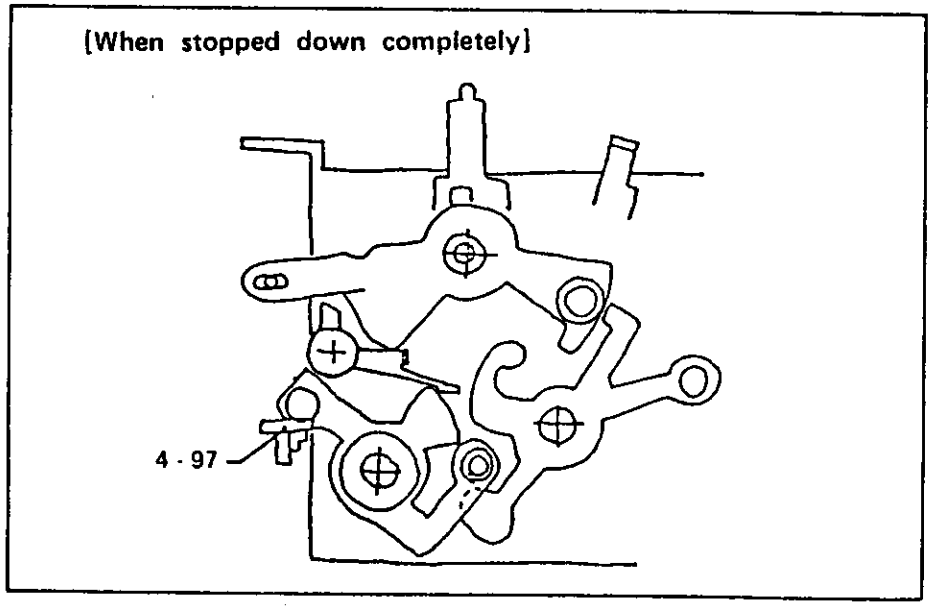

[When completely charged]
4 · 59
4 · 95
Spring
4 · 150
4 · 152
4 · 15
4 · 16
Point where holding force
of the ML magnet applied.
4 · 47

Fig. 46


[When stopped down completely]
4 · 97

5 - 5 Mirror assembly (4 - 1)

a. When installing the mirror (4 - 8), use adhesive tape.

b. Hook the spring (4 - 26) between the mirror assembly (4 - 1) and lens mount base (3 - 34).

c. When installing the cover (4 - 34), insert the projection (for positioning) of the cover into the hole correctly or otherwise the mirror assembly (4 - 1) will be hooked by the cover.

Fig. 47

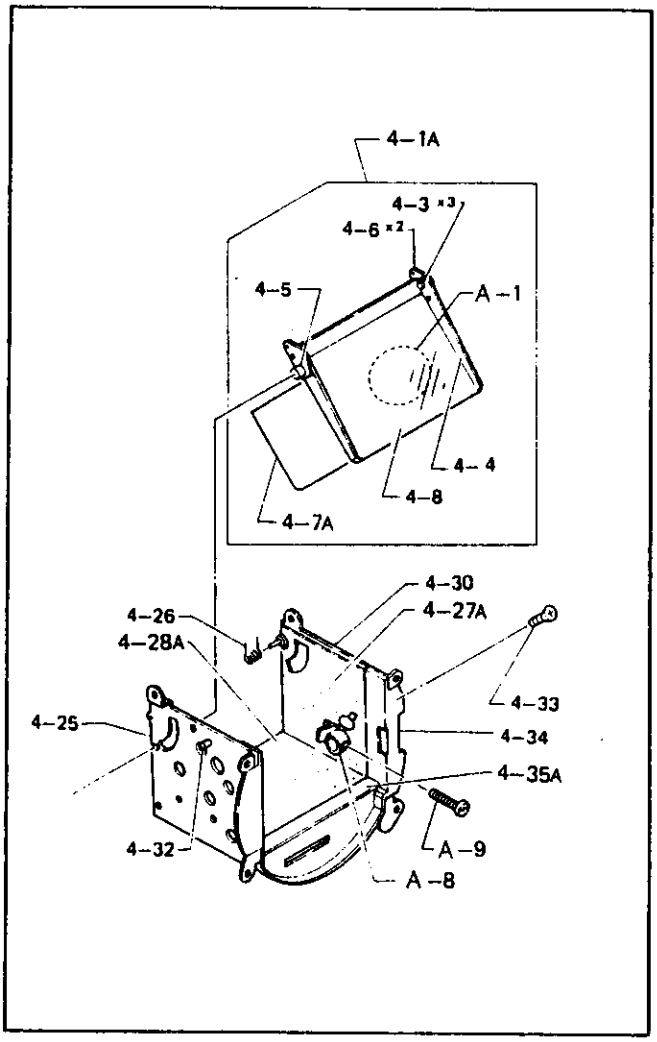
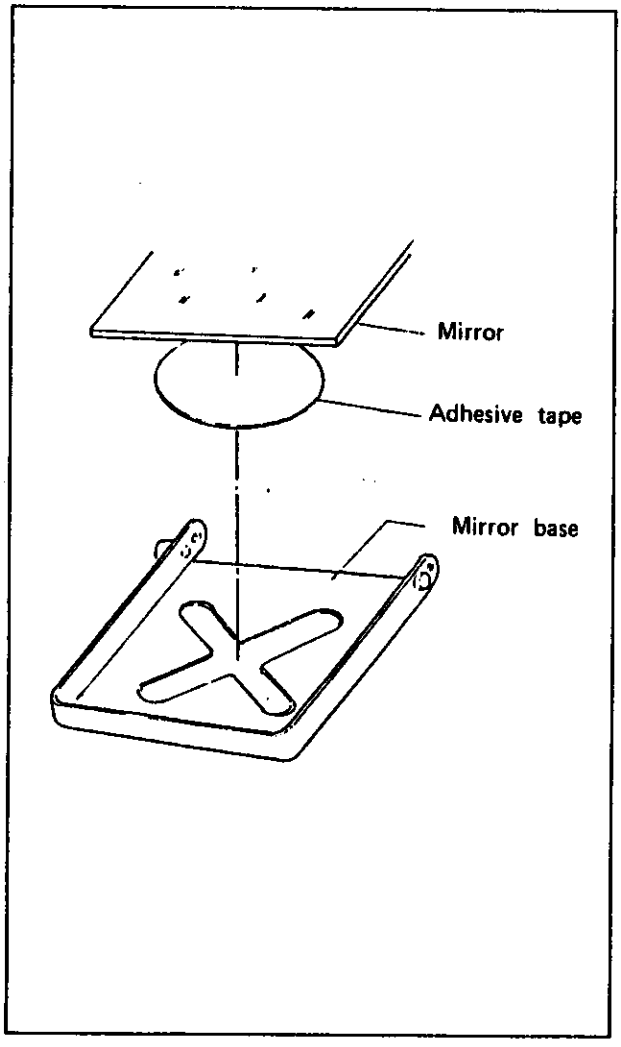

4–1A
4–3 ×3
4–6 ×2
4–5
A–1
4–4
4–8
4–7A
4–30
4–27A
4–26
4–28A
4–33
4–25
4–34
4–35A
A–9
4–32
A–8

Fig. 48


Mirror
Adhesive tape
Mirror base

6. Lens mount base assembly (3 - 54)

6 - 1 Lock pin (3 - 42)

a. Make sure that the lock pin moves smoothly and that it can be pushed down below the flange surface correctly.

b. Make sure that the lock pin is projected correctly by the leaf spring (3 - 27).

6 - 2 Button (3 - 49)

a. Insert the projection of the lever (3 - 48) into the guide groove on the diecast lens mount base, and combine the button (3 - 49) with the lever (3 - 48) in such a manner as that the button and lever hold the diecast lens mount base between them.

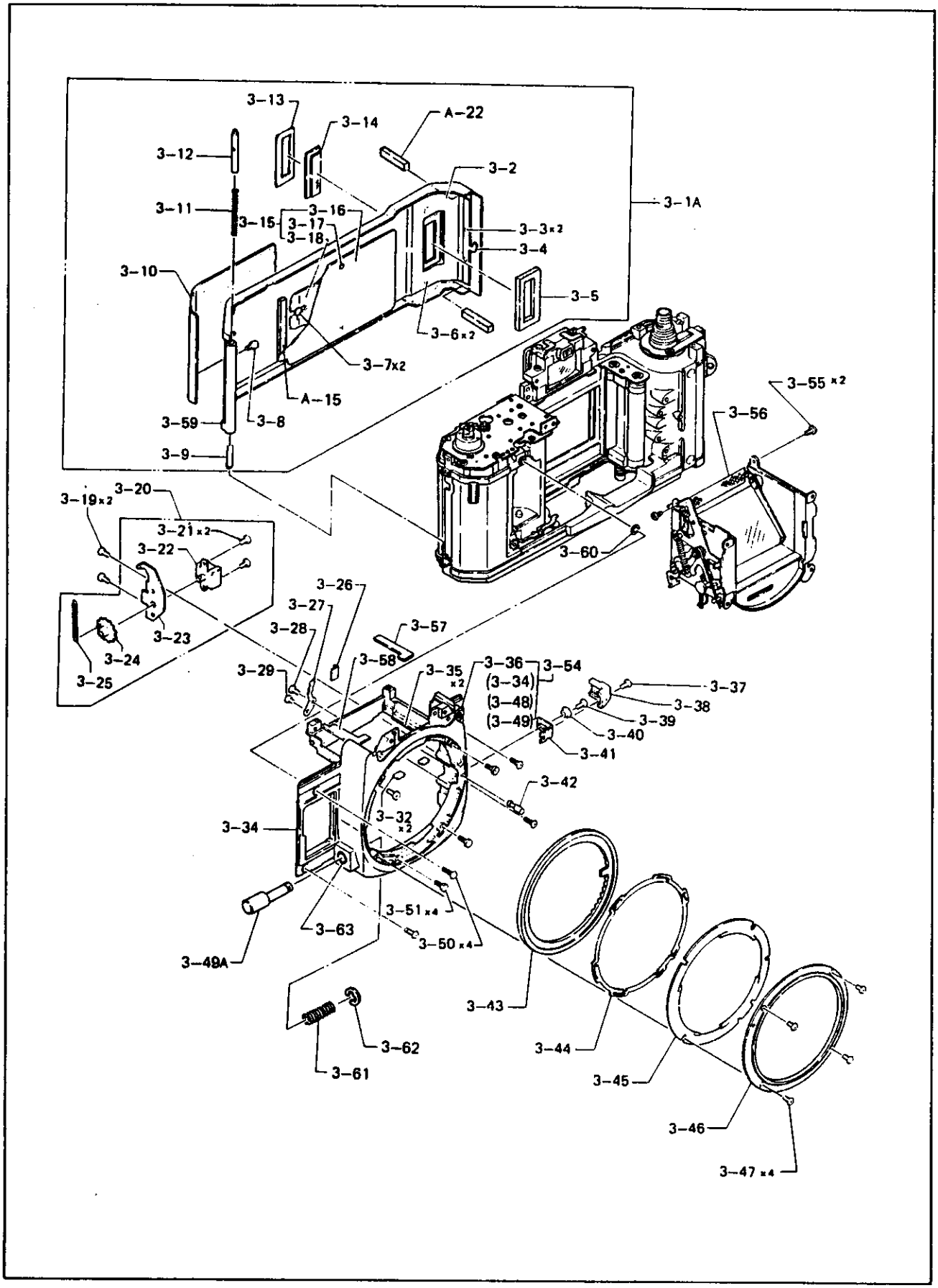
b. Push the button into the lens mount base until it comes into contact with the lever.

c. Install the lever and button with Araldite.

6 - 3 Installing mirror assembly (4 - 1)

- Tighten four screws (3 - 51) at the front face of the lens mount base, tighten two screws (3 - 55) at the side, and thus, install the mirror assembly on the lens mount base.

Fig. 49


3-13
3-14
A-22
3-12
3-2
3-11
3-15
3-16
3-17
3-18
3-1A
3-3 x2
3-4
3-10
3-5
3-6 x2
3-7x2
A-15
3-59
3-8
3-9
3-55 x2
3-56
3-60
3-19 x2
3-20
3-21 x2
3-22
3-23
3-24
3-25
3-26
3-27
3-28
3-57
3-58
3-29
3-35 x2
3-36
(3-34)
(3-48)
(3-49)
3-54
3-37
3-38
3-39
3-40
3-41
3-42
3-34
3-32 x2
3-51 x4
3-63
3-50 x4
3-49A
3-43
3-44
3-45
3-46
3-47 x4
3-62
3-61

6-4 Installing mount ring (3-46)

a. Carefully combine the aperture transmission ring (3-43) with the leaf spring (3-44) and claw ring (3-45), and install the mount ring (3-46) on the lens mount base with four screws (3-47).

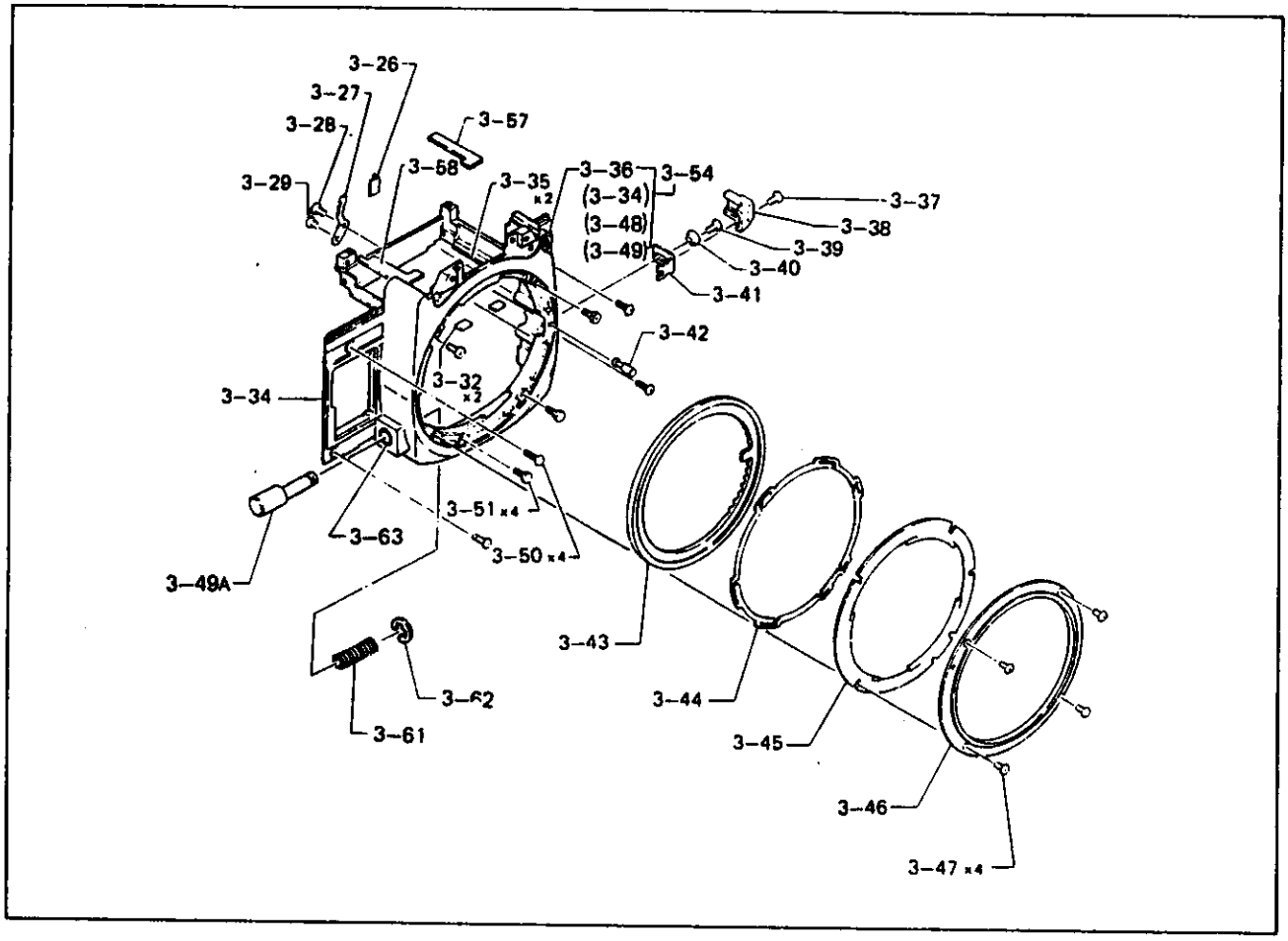
b. Make sure that the claw ring (3-45) is not riding on the lens mount base (3-34). If this claw ring is on the lens mount base, focusing will not be made in the viewfinder or correct flangeback cannot be obtained.

c. Make sure that the aperture transmission ring (3-43) moves smoothly.

d. Apply Helicolube-Molycote mixed grease to the contact surfaces of the claw ring (3-45) and leaf spring (3-44) slightly.

e. Apply Losoid grease to the claw portions of the bayonet mount to improve smoothness. In this case, apply Losoid grease to the flange surface of the lens and claw portions, and wipe off the grease from the lens side after installing the lens on the camera.

Fig. 50


3-26
3-27
3-28
3-57
3-29
3-58
3-35 x2
3-36
(3-34)
(3-48)
(3-49)
3-54
3-37
3-38
3-39
3-40
3-41
3-42
3-34
3-32 x2
3-51 x4
3-63
3-50 x4
3-49A
3-43
3-62
3-61
3-44
3-45
3-46
3-47 x4

6 - 5 Installing F - value resistor assembly (3 - 20)

a. Make sure that resistance across the white and blue lead wires is 0 to 2 KΩ (±20%).

b. Combine the stopper of the gear (3 - 24) with that of the holding plate (3 - 23), and install the spring (3 - 25).

c. Set the gear (3 - 24) so that the spring is wound one to two teeth of the gear.

d. Turn the aperture transmission ring (3 - 43) counterclockwise (when observed from the lens side) until it comes into contact with the stopper.

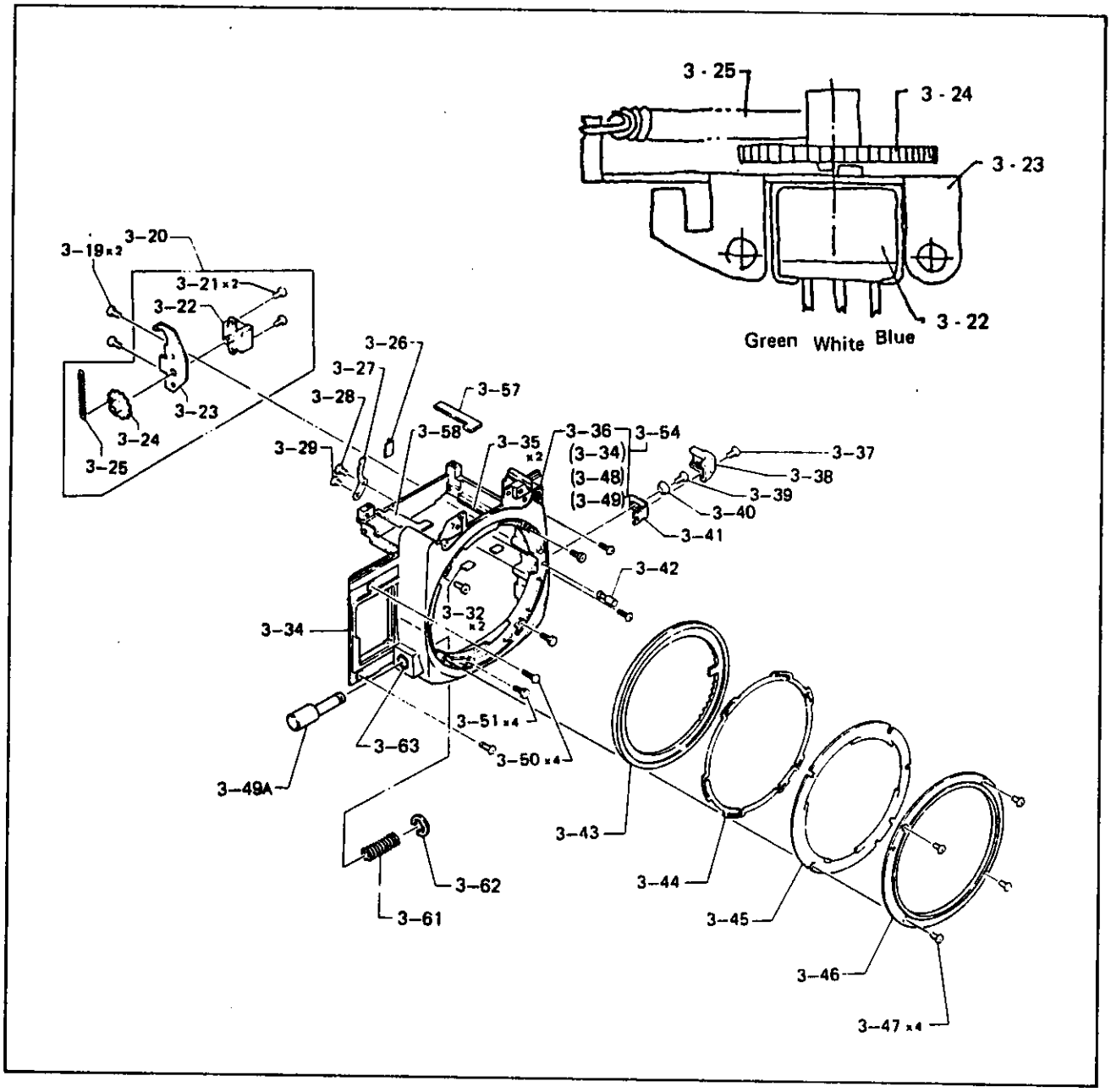
e. Combine the F - value resistor assembly (3 - 20) with the aperture transmission ring (3 - 43).

f. After tightening the screws, make sure that the aperture transmission ring (3 - 43) is caused to return to the stopper smoothly by the spring (3 - 25).

g. Make sure that resistance across the white and blue lead wires of the potentiometer assembly (3 - 22) is about 200Ω at the minimum aperture side or about 2 KΩ at the full aperture side.
Further, make sure that resistance varies from 200Ω to 2 KΩ as the aperture is changed from the minimum aperture to full aperture.

h. Apply Helicolube - Molycote mixed grease slightly to the portion of the gear (3 - 24) which slides on the mirror case.

Fig. 51


3 - 25
3 - 24
3 - 23
3 - 22
Green White Blue
3-19 x 2
3-20
3-21 x 2
3-22
3-23
3-24
3-25
3-26
3-27
3-28
3-29
3-57
3-58
3-35 x 2
3-36
(3-34)
(3-48)
(3-49)
3-54
3-37
3-38
3-39
3-40
3-41
3-42
3-32 x 2
3-34
3-51 x 4
3-50 x 4
3-63
3-49A
3-62
3-61
3-43
3-44
3-45
3-46
3-47 x 4

7. Adjustment of mirror angle (45°)

a. Adjust the base plate of a collimater (Gokosha Model 24LT-2D) in parallel.

b. Set the lens mount base on the special tool (J10633).

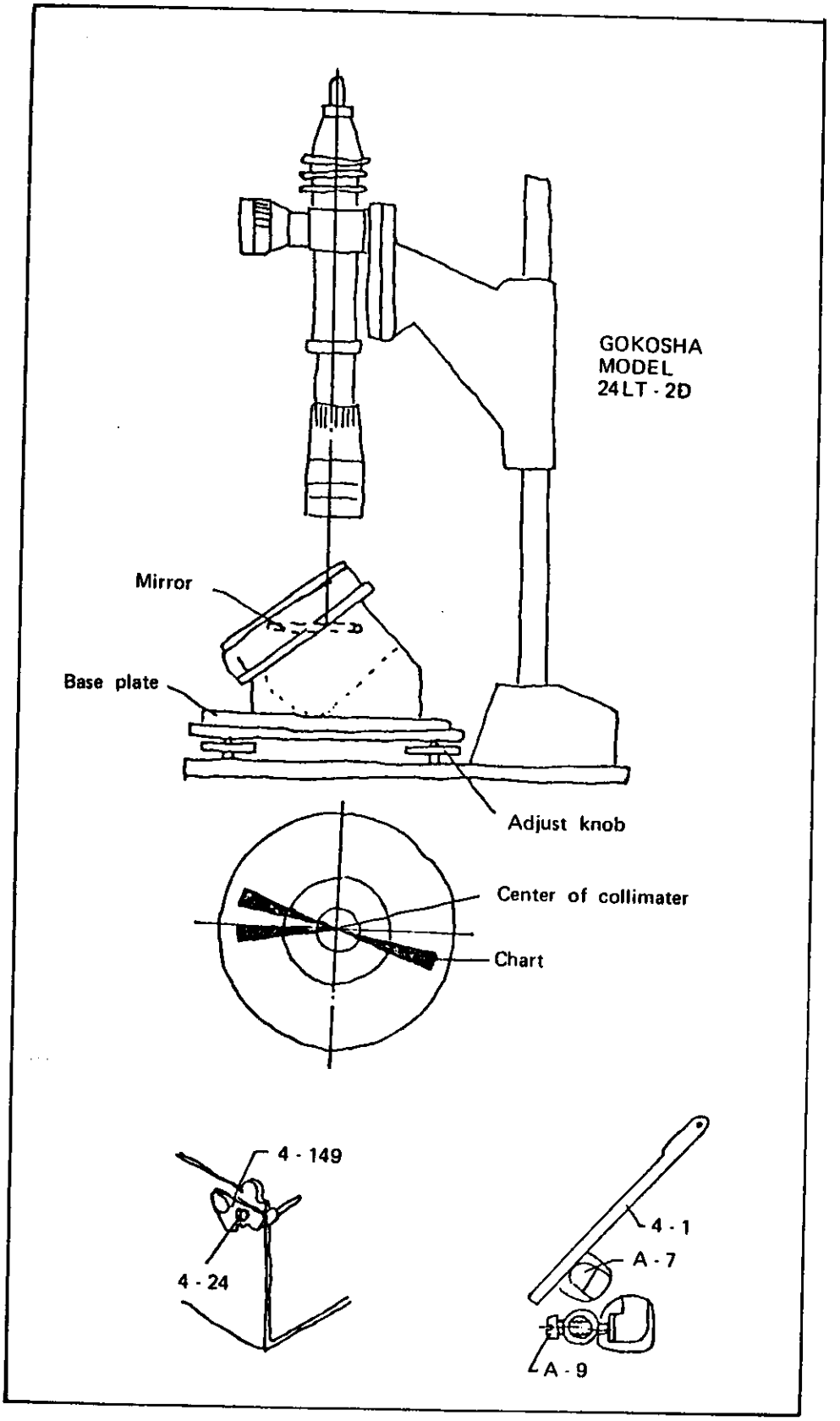
c. Loosen the screw (4-24), and adjust the shaft holder (4-149) to adjust parallelism of the mirror.

d. Adjust 45° angle of the mirror with the screw (4-33).

e. When the adjustment is completed, retighten the screws (4-24 and 4-33) securely and lock them with screw locking agent.

f. Adjust 45° angle of the mirror based on the installation hole of the lens mount.

Fig. 52


GOKOSHA
MODEL
24LT-2D
Mirror
Base plate
Adjust knob
Center of collimater
Chart
4-149
4-24
4-1
A-7
A-9

8. **Installation of lens mount base assembly and adjustment of flangeback**

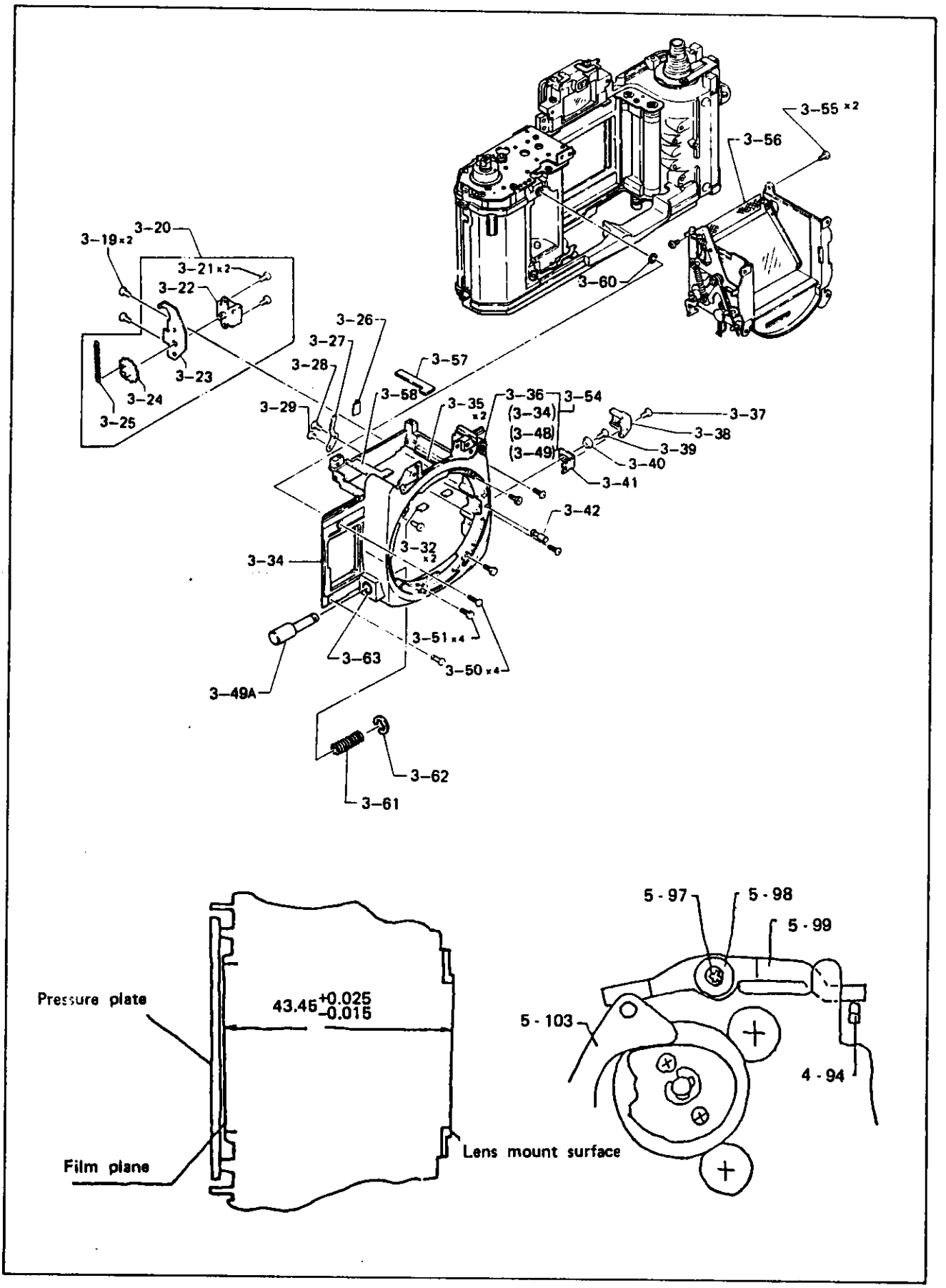
   a. Install the lens mount base assembly on the camera body carefully so that lead wire is not held between them.

   b. Adjust flangeback to 43.45 $^{+0.025}_{-0.015}$ mm by selecting a proper washer (3 - 60).

      NOTE: When the actual flangeback exceeds the limit, properly cut the camera body and lens mount installation surface with a file.

   c. Check the release lever (5 - 99) for its installing position, and install the release lever.

Fig. 53


3-55 x2
3-56
3-60
3-19 x2
3-20
3-21 x2
3-22
3-23
3-24
3-25
3-26
3-27
3-28
3-57
3-58
3-29
3-35 x2
3-36
(3-34)
(3-48)
(3-49)
3-54
3-37
3-38
3-39
3-40
3-41
3-42
3-34
3-32 x2
3-51 x4
3-50 x4
3-63
3-49A
3-62
3-61
Pressure plate
43.45 +0.025 -0.015
Film plane
Lens mount surface
5 - 97
5 - 98
5 - 99
5 - 103
4 - 94

9. Installing magnet base plate assembly (5 - 73) and adjustment of focal plane shutter set value.

9 - 1 Installation

a. Place the mirror case assembly (4 - 10) under its mirror lowered state. Make sure that the magnet release lever is in its reset position.

b. Apply Helicolube and Molycote mixed grease to the claw portions of the 1st and 2nd shutter blind hook levers slightly.

c. Install the magnet base plate assembly (5 - 73) with three screws (5 - 74).

d. For the screw indicated as "A" in the right hand figure, be sure to use a screw (110M140151S).
When this screw is too long, the screw tail will come into contact with the release lever (5 - 99) causing the quick - return mechanism not to be set.

9 - 2 Adjustment of focal plane shutter set value

- Loosen two screws (5 - 119) and adjust position of the gear base assembly (5 - 120) so that there is a gap (0.5 to 0.8 mm) between the lever (5 - 148) and cam plate assembly (5 - 82) when the film advance lever is wound up completely (when the notched gear (5 - 67) disengages with the gear base assembly (5 - 120)).
- When the film advance lever becomes suddenly heavy immediately before completing the winding up, this gap is excessive.
Reduce this gap.
- Wind up the film advance lever and release the shutter several times, and lock the two screws (5 - 119) with Pliobond after insuring that the gap is proper.

Fig. 54

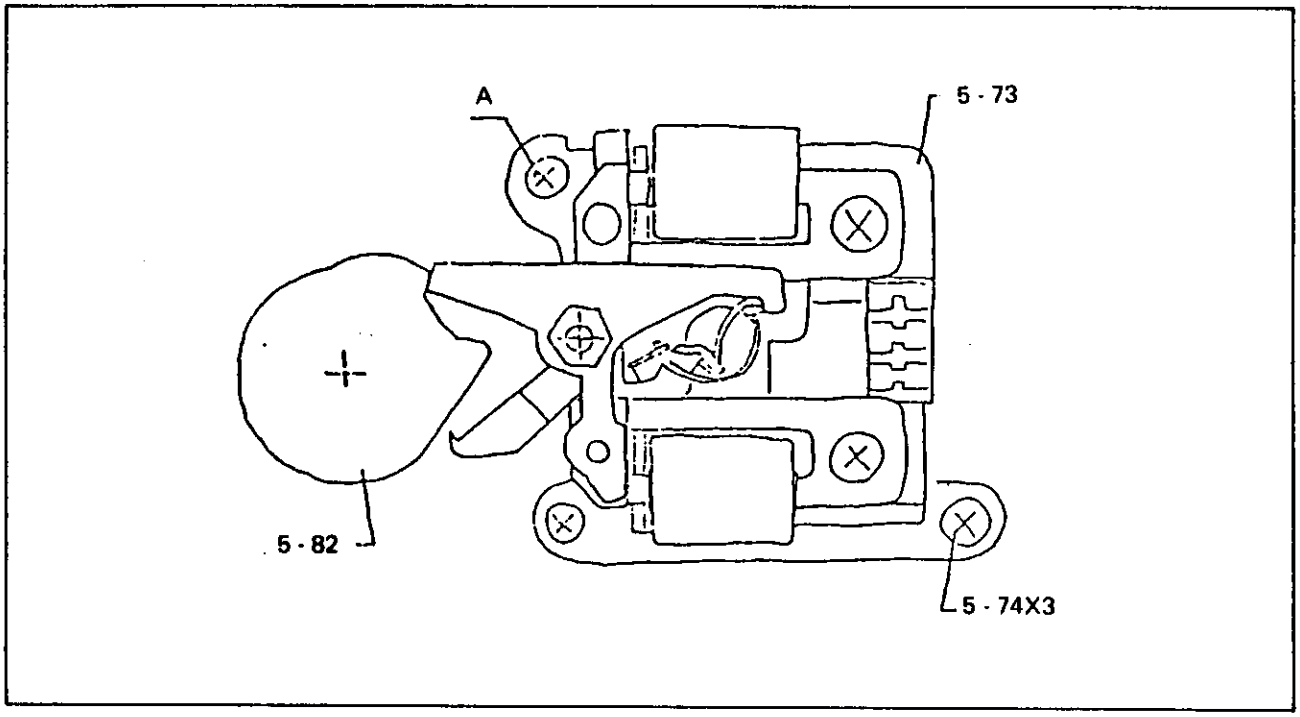
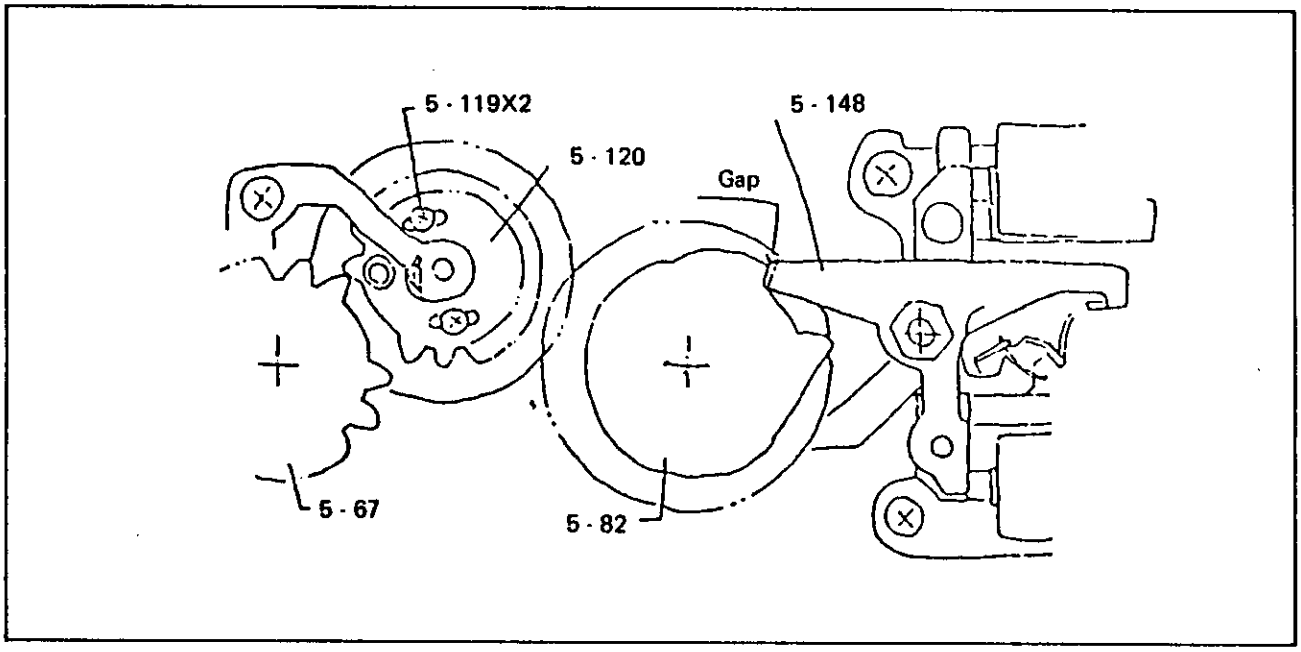


Fig. 55



10. Adjustments of shutter blind traveling velocity and shutter speed

For the rated values, refer to the table shown in the right hand page.

10-1 When the amplifier built in the camera is not used.

a. Use a standard time generator.

b. Connect the standard time generator to the M-circuit board assembly (2-64) by soldering lead wires.

c. Apply signal of 1/60 sec. (15.6 ms), and adjust traveling velocities of the 1st and 2nd blinds respectively to 12.0 msec and 12.8 msec.

NOTE: At 1/1000 sec. shutter speed, traveling velocity of 2nd blind is also 12.0 msec.

d. Apply signals of 1/500 sec. and 1/1000 sec. to the camera, and select a capacitor (7-43) having the adequate capacity so that the rated values are satisfied. Fine adjustments can be mode with Variable Resister (2-64B).

NOTE:
- At 1/1000 sec. shutter speed, try your best to obtain 1.0 msec.
- Match traveling velocity of the 1st blind with that of the 2nd blind.
- Note that when the traveling velocity of the 2nd blind is matched with that of the 1st blind at 1/1000 sec. shutter speed, the traveling velocity of the 2nd blind becomes slower than that of the 1st blind at a slower shutter speed. For example, it will become about 0.8 msec. slower at 1/60 sec. shutter speed.

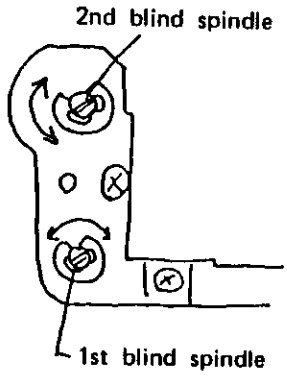
e. When 0.5 msec. is measured with 1/500 sec. shutter speed signal applied to the camera without using capacitor, it is most ideal.
When 0.5 msec. is not measured, add a capacitor after checking the followings.

- Overlap value of the metal fixtures of the 1st and 2nd blinds.
- Attracting force of the β magnet (for 2nd blind)
- Position of the stop lever (5-159).

f. Adjustment of synchro-delay time (X-contact)

- Rating for inspection: 0.4 msec. to 2.0 msec.
- Adjust it by bending the contact piece (5-138) at 1/60 sec. shutter speed.

Fig. 56



Traveling velocity of the blind becomes faster as the spindle is turned clockwise.

Traveling velocity of the blind becomes slower as the spindle is turned counterclockwise.

Unit of measure ms

Shutter speed	Adjusting range	Standard for inspection	Standard for exported model
$\frac{1}{1000}$	0.8 — 1.25	0.65 — 1.37	0.58 — 1.64
$\frac{1}{500}$		1.43 — 2.67	1.16 — 3.28
$\frac{1}{250}$		2.86 — 5.37	2.32 — 6.57
$\frac{1}{125}$		5.92 — 10.7	4.65 — 13.1
$\frac{1}{60}$		11.4 — 21.3	11.0 — 22.1

Fig. 57

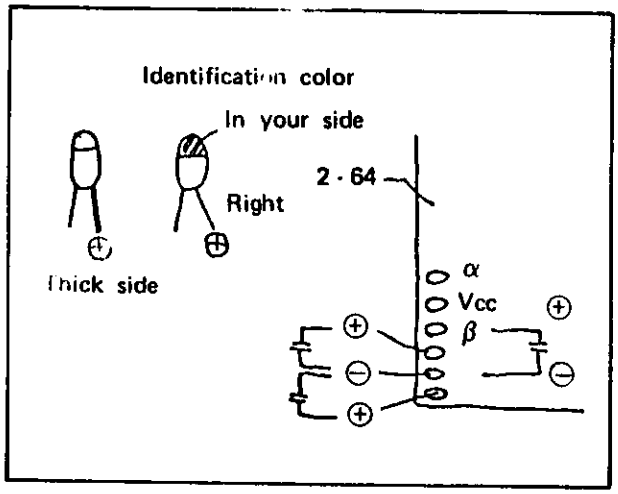
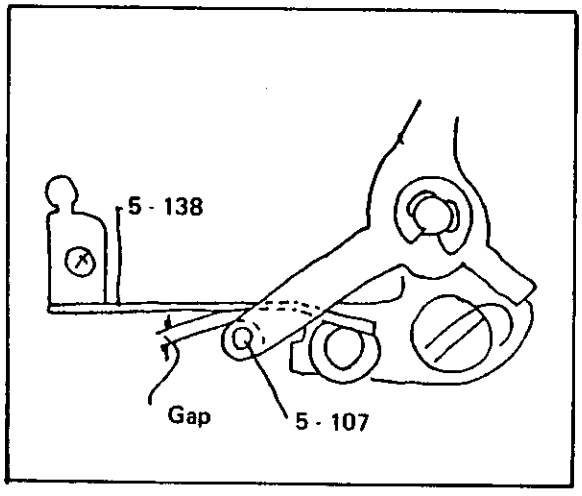


Fig. 58



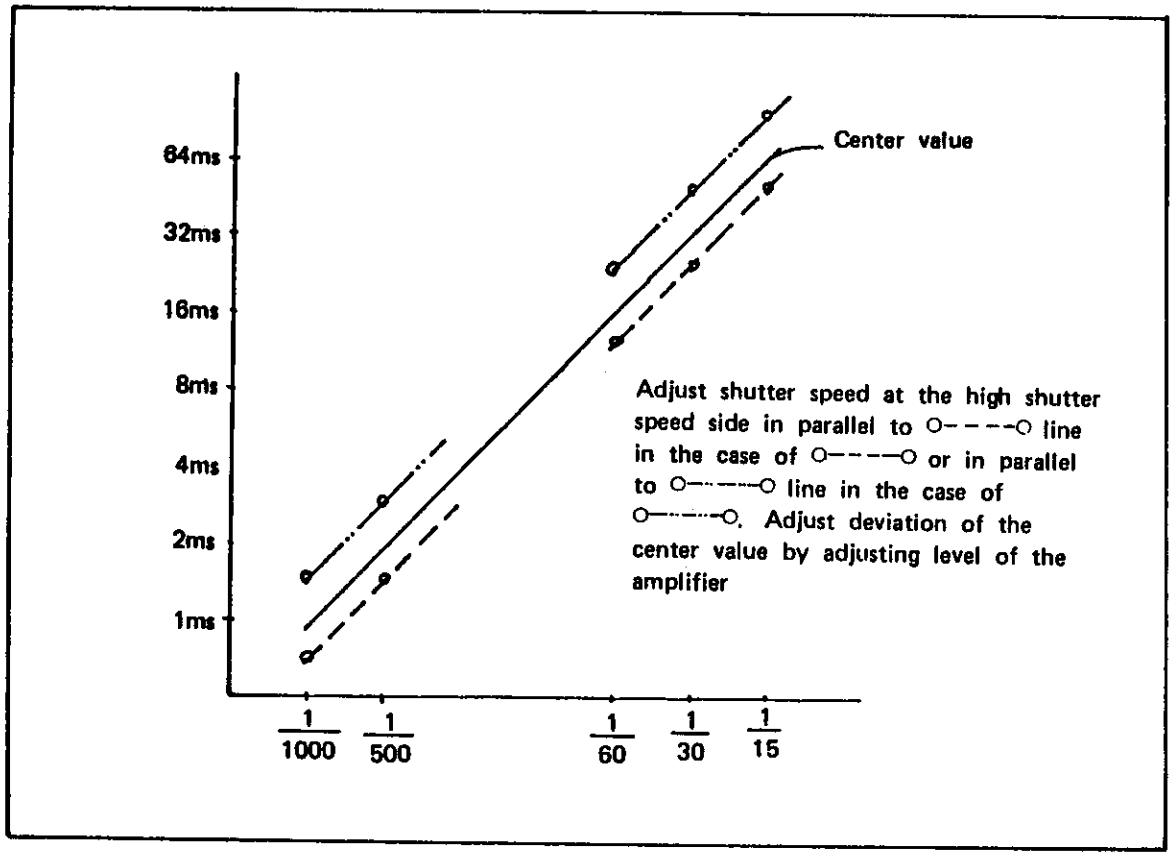
10-2 When the amplifier built in the camera is used.

a. Set shutter speed to 1/60 sec., and measure shutter speed.
With the 1st and 2nd blind traveling velocities adjusted respectively to 12.0 and 12.8 msec., the measured shutter speed must satisfy the rated shutter speed.

- When the shutter speed at 1/60 sec. is unsatisfactory, perform interval adjustment by the use of a standard time generator, and readjust level of the amplifier.
- When the shutter speed at 1/60 sec. is satisfactory, adjust shutter speeds at 1/1000 sec. and 1/500 sec. in the method described in 10-1 above.

NOTE: It is desirable to find an under or over shutter speed against the standard value at 1/60 sec. or faster shutter speed first. Next, adjust shutter speed in as much as the found over or under shutter speed at 1/1000 sec. shutter speed, and then, adjust level of the amplifier to adjust the actual shutter speed to the center value.

Fig. 59

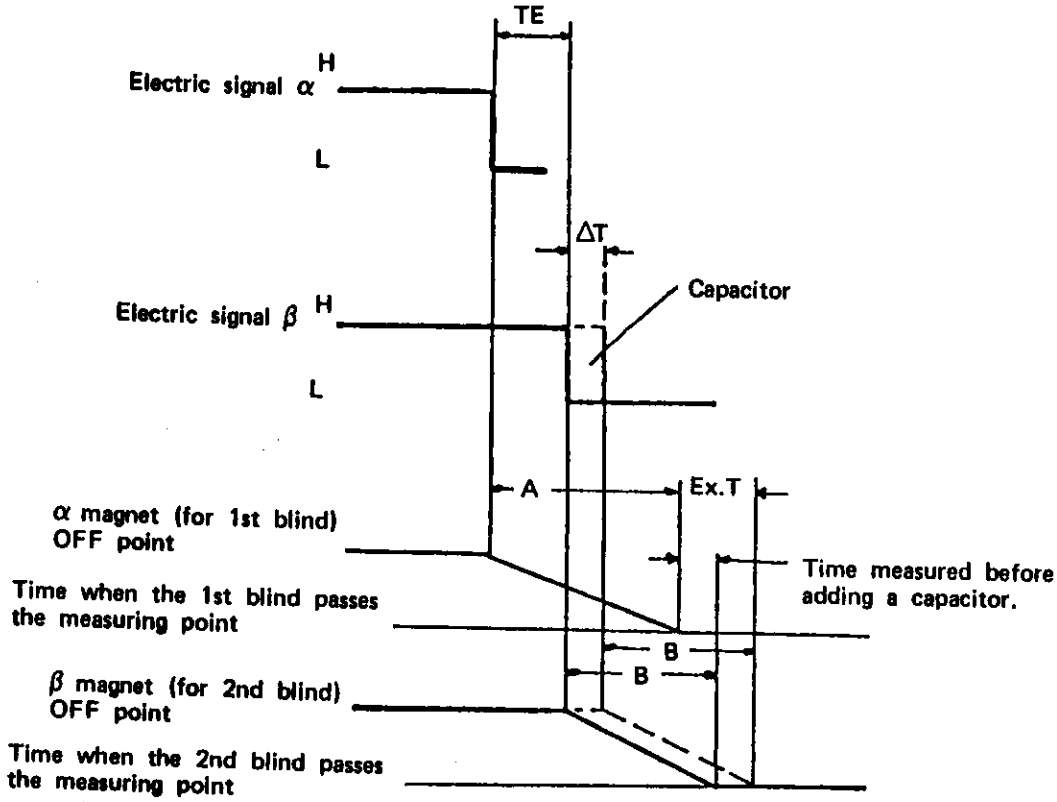

64ms
32ms
16ms
8ms
4ms
2ms
1ms
Center value
Adjust shutter speed at the high shutter speed side in parallel to O----O line in the case of O----O or in parallel to O-·---O line in the case of O-·---O. Adjust deviation of the center value by adjusting level of the amplifier
1/1000
1/500
1/60
1/30
1/15

10-3 Capacitor (7-43)

- The 1st and 2nd blinds are controlled by electric signals α and β respectively.
- Electrically, 1 msec. time deviation always exists between the α and β signals at 1/1000 sec. shutter speed.
- Mechanically (relationship between magnet and shutter blind), the time required by the 1st blind in passing the time measuring point differs from that by the 2nd blind, and time required by the 2nd blind is 1.5 to 1.0 msec. shorter than that by the 1st blind.
- A delay time provided by a capacitor is added to the actual time provided by the amplifier by applying the capacitor to the β signal line so that the time difference of the amplifier is balanced with that of the shutter blind.
- Capacitors of the following capacities are available for this purpose.

0.047 μF (Red)
0.068 μF (Purple)
0.1 μF (Yellow)
0.22 μF (Gray)
0.33 μF (Orenge)
0.47 μF (Green)

Fig. 60



$A > B \quad A - B \fallingdotseq 1.5\,ms$

When $A = B$, $T_E = Ex.T$

Adjust ΔT so that $B + \Delta T = A$.

10-4 Typical examples of trouble and probable causes

a. Approximately 5 msec. are counted at 1/1000 sec.

Cause: ○ Coil of α magnet (for 1st blind) is broken or attracting force of the α magnet is insufficient.

b. Shutter blind does not open.

Cause: ○ Coil of β magnet (for 2nd blind) is broken or attracting force of the β magnet is insufficient.

○ Insufficient claw engagement.

Corrective action: ○ To recover attracting force of the magnet, clean the attracted piece.

○ Set shutter speed to "B" to move the iron core to the attracting position, and with the shutter speed "B" maintained, retighten the set screw.

c. Both the 1st and 2nd blinds do not run.

Cause: ○ ML magnet does not operate.

○ Improper position of the stop lever (5-159)

○ Relase lever (5-163) does not operate.

d. 1/1000 sec. shutter speed fluctuates.

Cause: ○ Insufficient attracting forces of α and β magnets.

○ Insuffucuent holding forces of α and β magnets.

○ Attracted piece is not fixed securely.

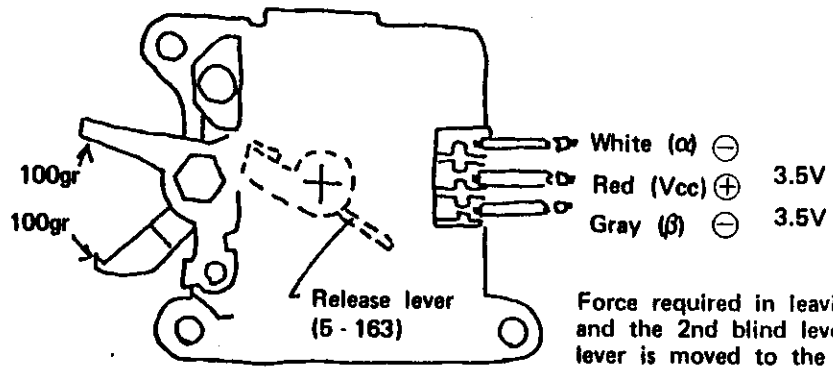
e. The 1st blind opens when wound up rapidly.

Cause: ○ Insufficient engagement of 1st blind hook and improper height.

○ Release lever (5-163) of the magnet moves when winding up the shutter blind.

Fig. 61

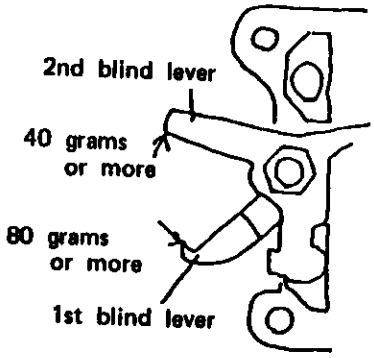
Attracting force



Force required in leaving the 1st blind lever and the 2nd blind lever when the release lever is moved to the position shown by the dotted line.

Fig. 62

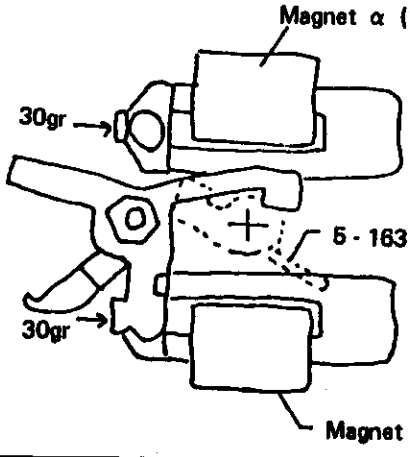
Holding force



Force required in separating the attracted piece from the iron core when a force is applied toward arrow mark direction.
NOTE: The release lever is in the free state.

Fig. 63

Repulsive force



A repulsive force should be generated when 30 grams are applied as shown in the left hand figure to turn the release lever (5 - 163) 30 to 35°.

11. Specifications for time magnet (a content of 5-73)

a. Attracting force: 200 grams or more with DC 3.5V applied.
When this magnet is built in the assembly (5-73), 100 grams or more at the designated point.

b. Holding force: 1st blind lever: 80 grams or more
2nd blind lever: 40 grams or more

c. Repulsive force: With the release lever turned 30 to 35°, 30 grams or more

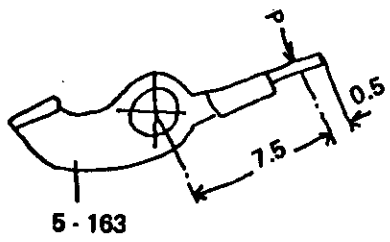
d. Release lever driving force: 110 grams or less

e. Release lever gap: 0.2 to 0.5 mm against the base plate.

f. Claw position: 1/2 to 1/3 engagement against the cam; Should oppose the cam center.

Fig. 64

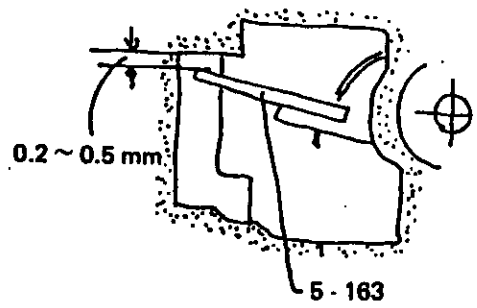
Release lever driving force



Force required in turning the release lever (5-163) with the attracted piece attracted, 110 grams (max.)

Fig. 65

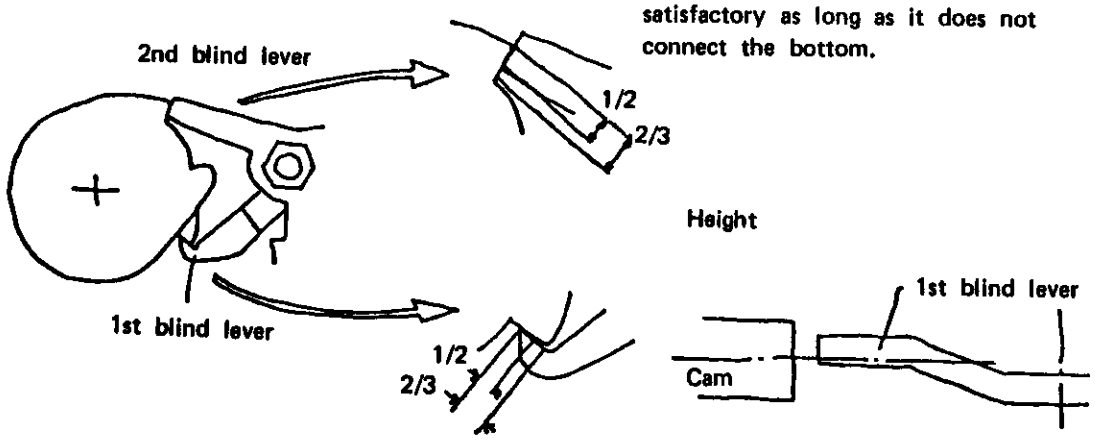
Release lever gap



With the release lever freed, a gap (0.2 to 0.5 mm) should exist against the base plate.

Fig. 66

Claw position



For the deeper side, claw position is satisfactory as long as it does not connect the bottom.

12. Viewfinder

12-1 Installing eyepiece assembly (5-6)

- Install the eyepiece assembly (5-6) on the camera body with two screws (5-5).

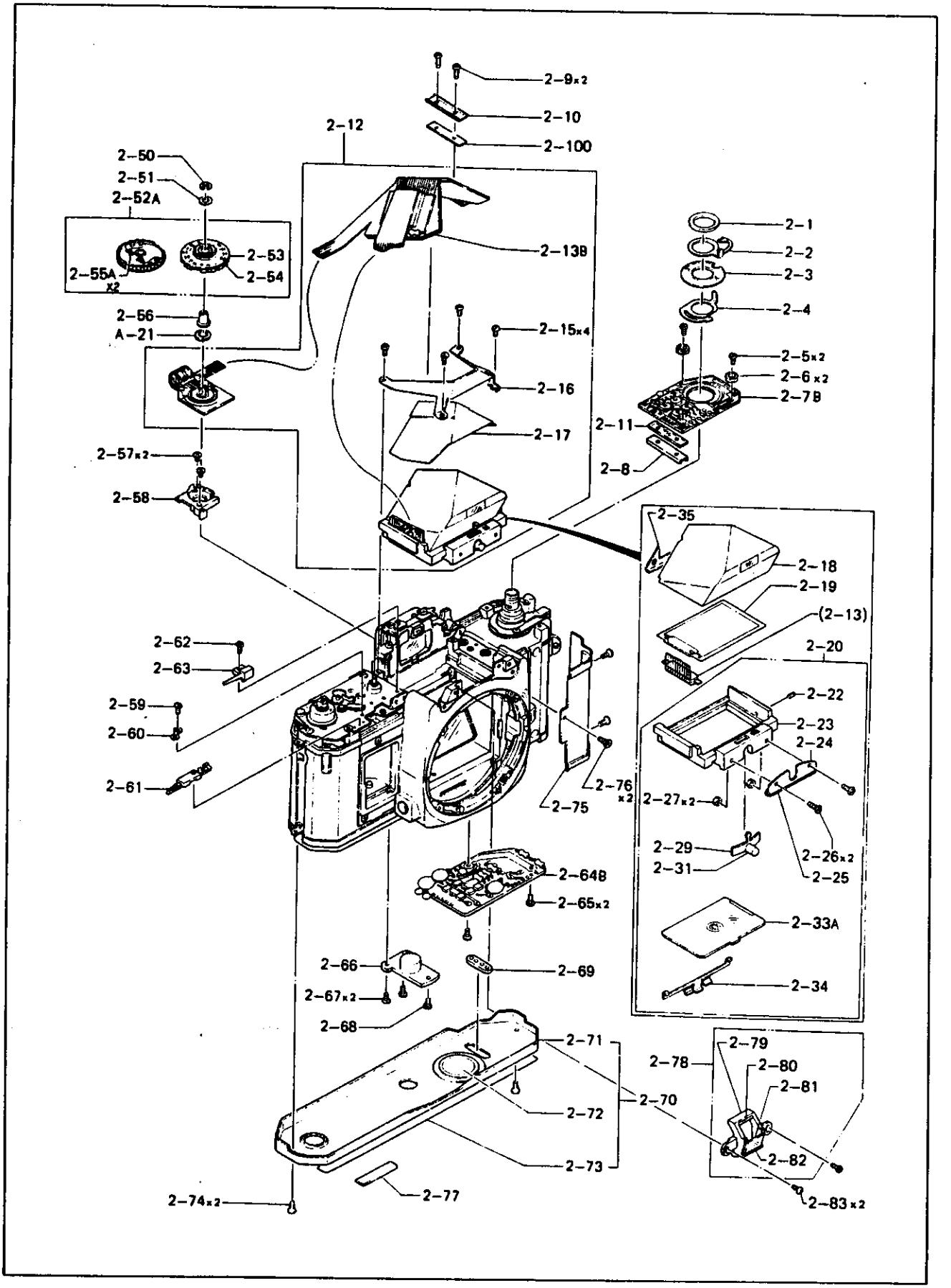
12-2 Adjustment of focusing

- Assemble the penta prism (2-18) with the prism case assembly (2-20) temporarily, and make sure that the split images seen in the viewfinder are matched.
- When adjustment is required, adjust thickness of the washers (3-57 and 3-58).
- When adjusting, lightly hold (about 100 grams) the penta prism (2-18).
- When proper washers are selected, secure them with Pliobond.
- When adjusting the focusing, mount an F1.6/55 mm lens.

13. fo switch (formed by contact pin (2-31) and the contact pin of a lens mounted on the camera — In the circuit diagram, lead wire (7-27) is connected to this switch)

- This switch is a terminal which judges the maximum aperture of a lens mounted on the camera. (In the lens side, a resistor selected in response to the maximum aperture is used.)
- This switch functions to automatically set the maximum aperture of a lens mounted on the camera to FUJICA Auto Strobo.

Fig. 67


2-9x2
2-10
2-100
2-12
2-50
2-51
2-52A
2-53
2-54
2-55A x2
2-56
A-21
2-57x2
2-58
2-138
2-15x4
2-16
2-17
2-1
2-2
2-3
2-4
2-5x2
2-6x2
2-7B
2-11
2-8
2-35
2-18
2-19
(2-13)
2-20
2-22
2-23
2-24
2-26x2
2-25
2-27x2
2-29
2-31
2-33A
2-34
2-62
2-63
2-59
2-60
2-61
2-75
2-76 x2
2-64B
2-65x2
2-66
2-67x2
2-68
2-69
2-71
2-72
2-70
2-73
2-74x2
2-77
2-78
2-79
2-80
2-81
2-82
2-83x2

14. LED display and field of view in the viewfinder

a. The LEDs which display in the viewfinder must be seen clearly.

b. The LEDs which display shutter speeds must agree with shutter speeds on the shutter speed selector dial.

c. Make sure that :

- With the shutter selector dial set to "B", the LED for B lights.
- With the shutter selector dial set to "AE" or "AEL", on LED out of those for 2S through 1000 lights.
- With the shutter selector dial set to one out of 2S through 1000, the LED for the set shutter speed lights and the LED for the optimum shutter speed (automatically calculated based on the brightness of object and aperture selected on the mounted lens) blinks. Further, mode character "M" lights in this mode.

d. Applicability of photographing mode for each lens

New lens (except for super telephoto lens) → Aperture priority AE
Manual full aperture metering

New lens (super telephoto lens)
Conventional lens + Adapter
Auto Bellows
Microscope adapter
Reverse adapter
→ Stopped-down AE
Manual stopped-down metering

e. F-value on the aperture selector ring of the mounted lens

With a lens mounted on the camera, look into the viewfinder and make sure that an F-value on the aperture selector ring of the lens can be seen without a remarkable vignetting.

Fig. 68

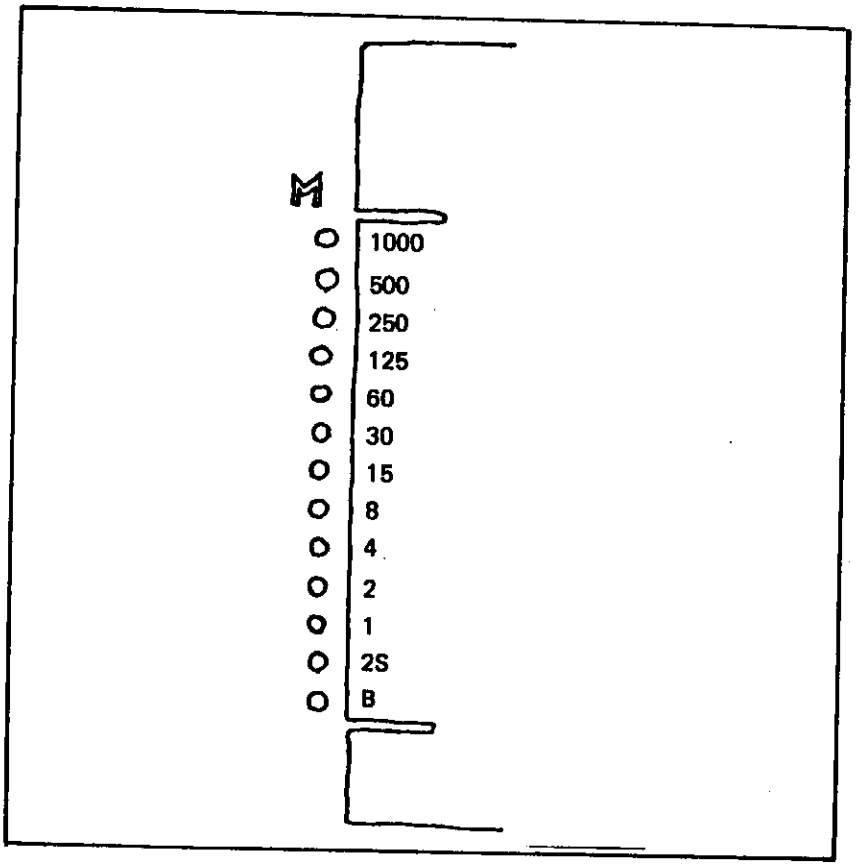
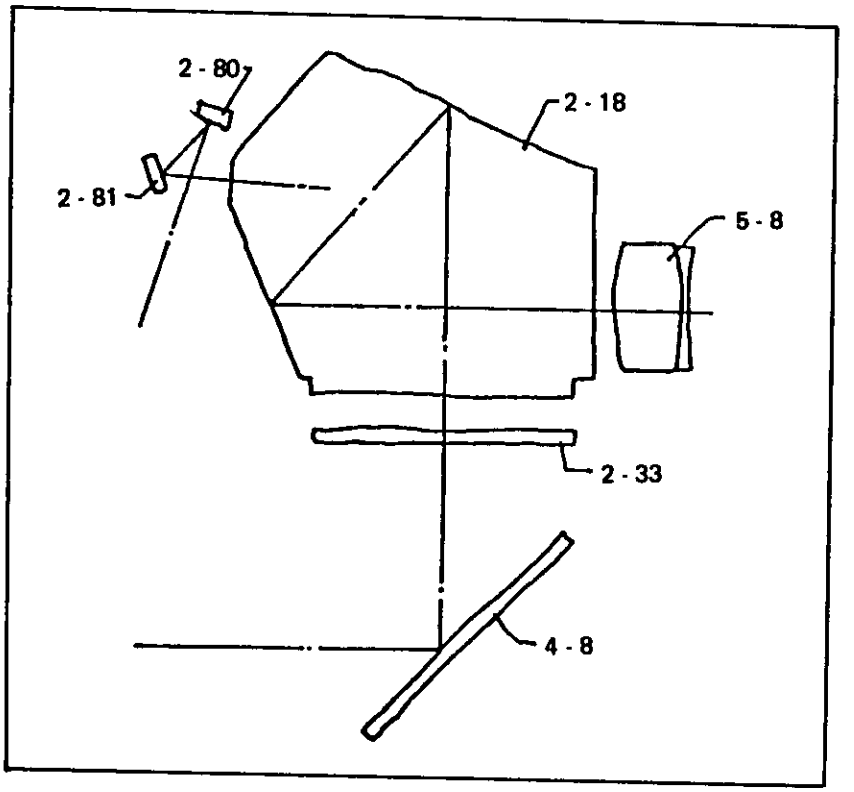


Fig. 69



15. Installing electrical parts and wiring

15-1 Installing parts

a. Printed circuit board (110B2056040)

- Place the printed circuit board (110B2056040) on the base (2-58) with care exercised on the positioning pins on the base (2-58).
- Screw the holder (2-56) into the shaft (6-9) carefully so as not to break the ceramic plate.
- Install the contact base assembly (2-52) on the holder (2-56) with care exercised on the two contact assemblies (2-55).

b. E7 circuit assembly (2-7)

- Install the channel plate A (2-8) on the bottom of the E1 circuit board (2-7). Be sure to install the insulation tape between the channel plate A (2-8) and circuit board (2-7).
- Secure the E1 circuit assembly with two screws (2-5).
  - When the screw is made of Nylon, no washer (2-6) is required.
  - When diameter of the installation hole on the camera body is 2 mm, use Nylon screws, or when it is 1.7 mm, use washers (2-6) and screws (2-5).

c. Connecting connector

- Match the pattern of the E1 circuit assembly (2-7) with that of the E3 circuit assembly (2-13).
- Secure them with two screws (2-9) through the rubber cushion (2-11) and channel plate B (2-10).
  Make sure that all the patterns have continuity.

Fig. 70

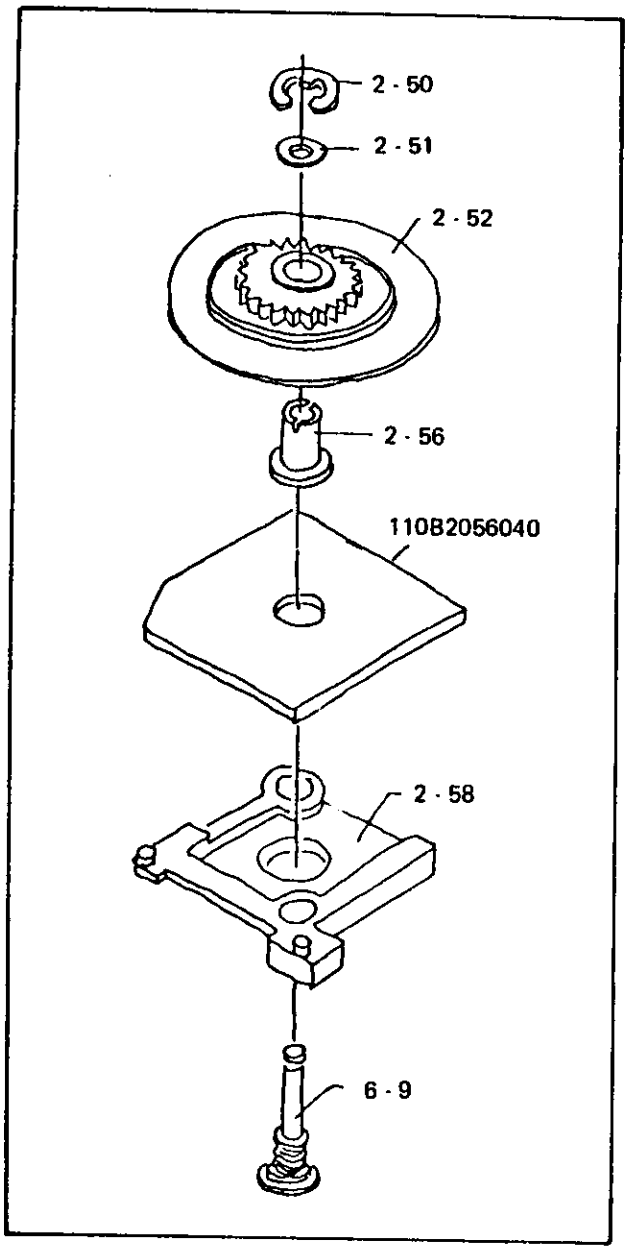


Fig. 71

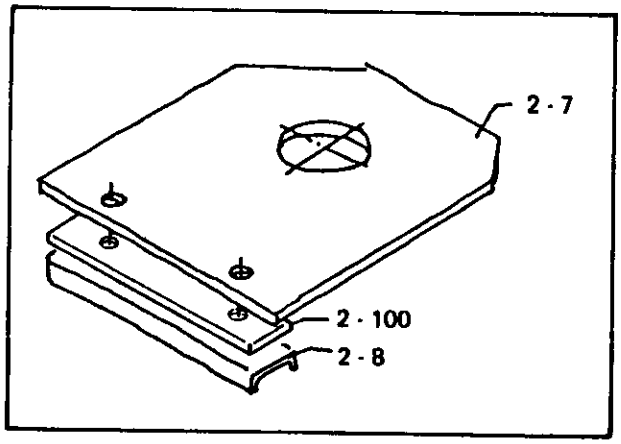
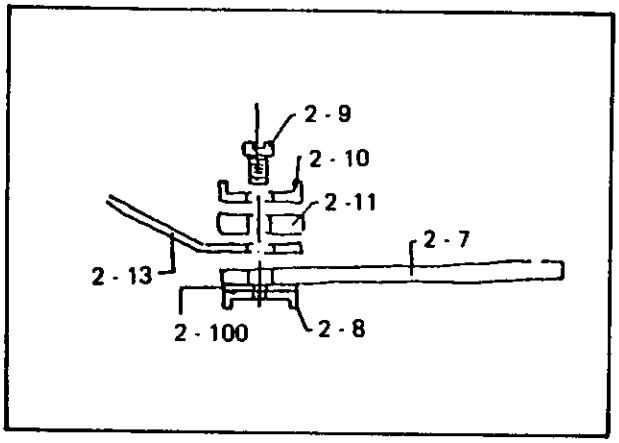


Fig. 72



c. Installing A-brush assembly (2-4) and S-brush assembly (2-2)

- o Install them around the rewind spindle assembly (6-107).
- o Combine the A-brush assembly (2-4), insulation plate (2-3), S-brush assembly (2-2) and fix ring (2-1) in that order.
- o Install the fix ring (2-1) with the mat side faced upward.
- o Make sure that the brush moves smoothly.
- o Make sure that the brush is in firm contact with the printed pattern of the E7 circuit assembly (2-7).

d. Installing S3 switch (2-63)

Install the S3 switch so that:

- o It turns off when the shutter is released.
- o It turns on when the shutter is charged completely.

With this switch turned off, the shutter cannot be released.
With this switch turned on, the shutter can be released.
When the film advance lever is turned in a half way with this switch turned on, the shutter is released before winding up the film advance lever completely.

Fig. 73

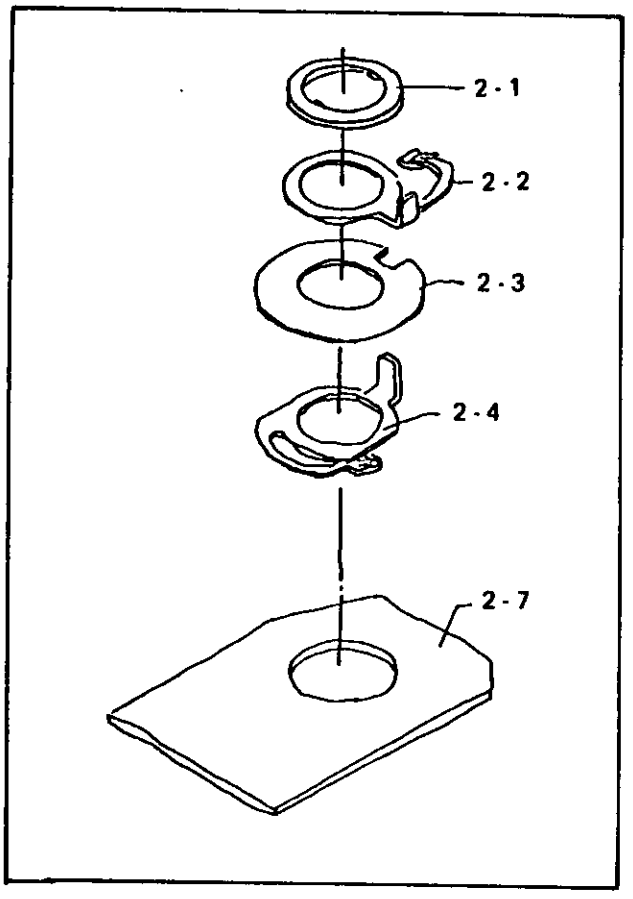


Fig. 74

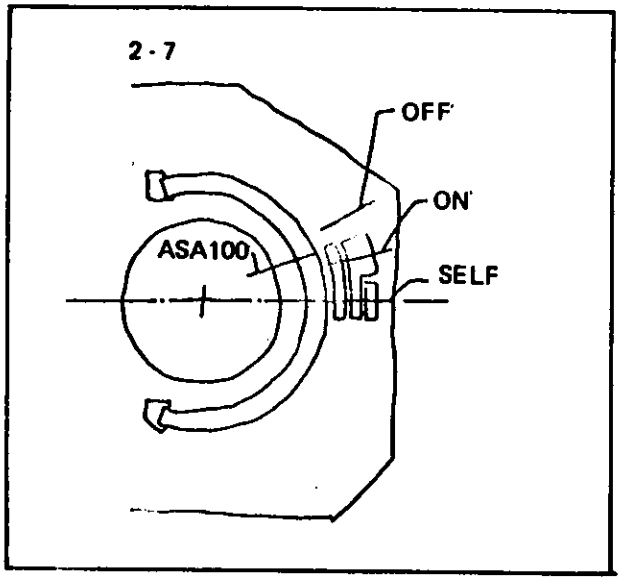
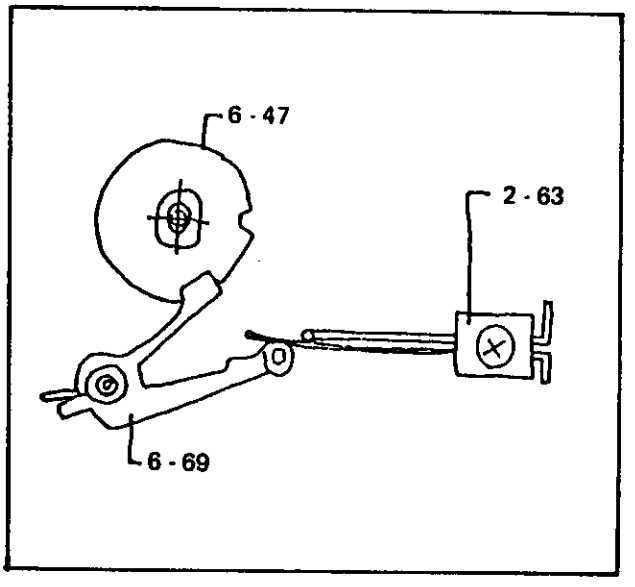
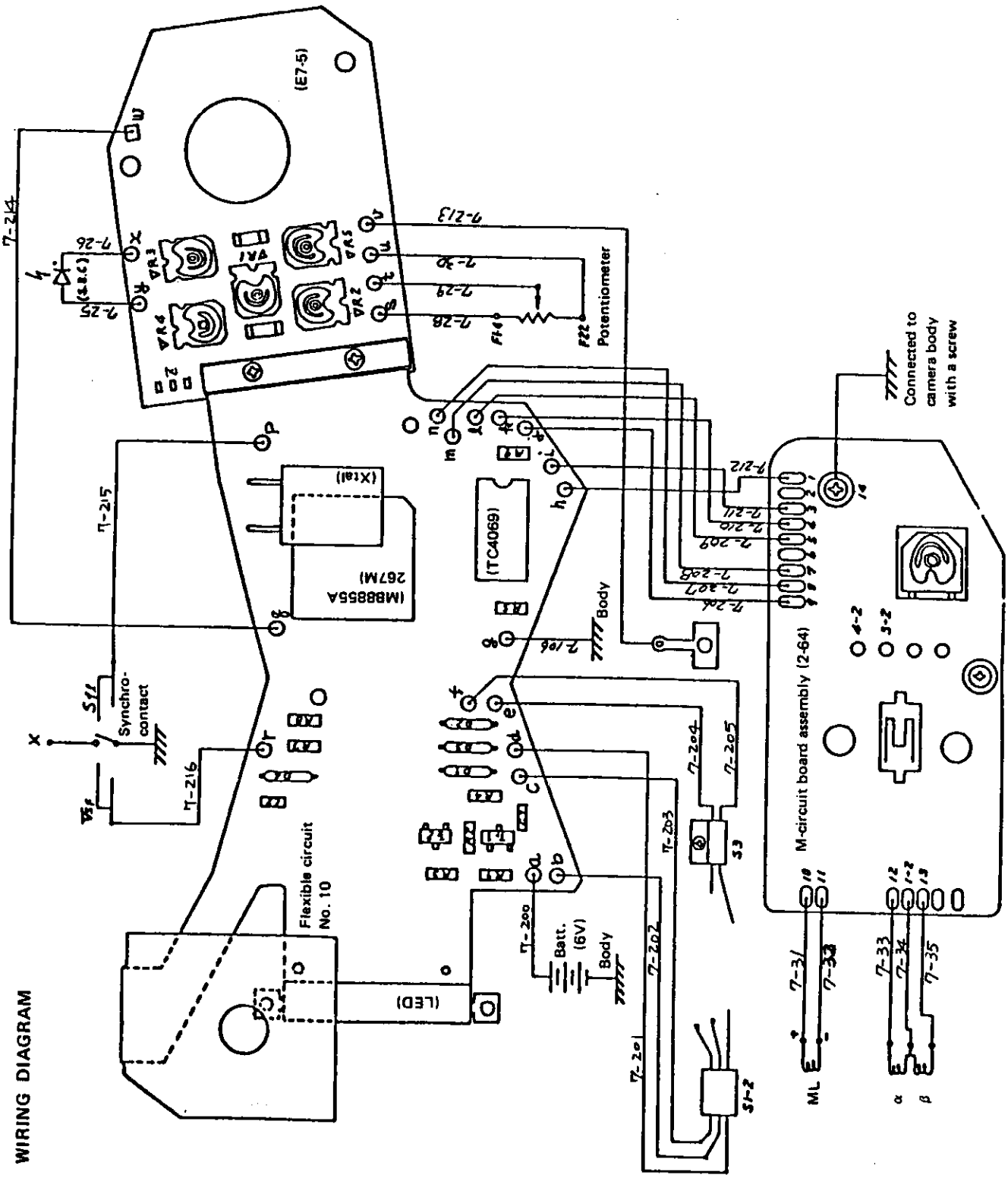


Fig. 75



15 - 2 Wiring

- o Refer to the wiring diagram and perform wiring correctly.
- o Carefully arrange lead wires so that no lead wire is held between parts.
- o When the lead wire (7-26) extended from the silicon cell is connected to the E7 circuit assembly (2-7B) by means of a soldering, apply silicon rubber to guarantee the insulation after cleaning the soldered portion with isopropyl alcohol or freon.
- o When replacing the silicon cell with a new one, be sure to disconnect the lead wire (7-26) at the silicon cell side, and clean the connected portion after soldering.


WIRING DIAGRAM
(E7-5)
Potentiometer
Connected to camera body with a screw
(TC4069)
(IMB8855A 267M)
(X'tal)
Synchro-contact
Flexible circuit No. 10
(LED)
Batt. (6V)
Body
M-circuit board assembly (2-64)
ML

15 - 3 Adjustment of electrical system

Do not touch variable resistors VR1 and VR5. These variable resistors have been completely adjusted at the plant.

1) Shutter speed

No external adjustment is required because all the electrical signals are controlled within the IC.

2) Adjustment of aperture step value

Adjust variable resistor VR2 properly so that voltage across terminals S and U of the circuit board (E7-5) is 0.960±0.005V.

3) Adjustment of V_{SF} voltage

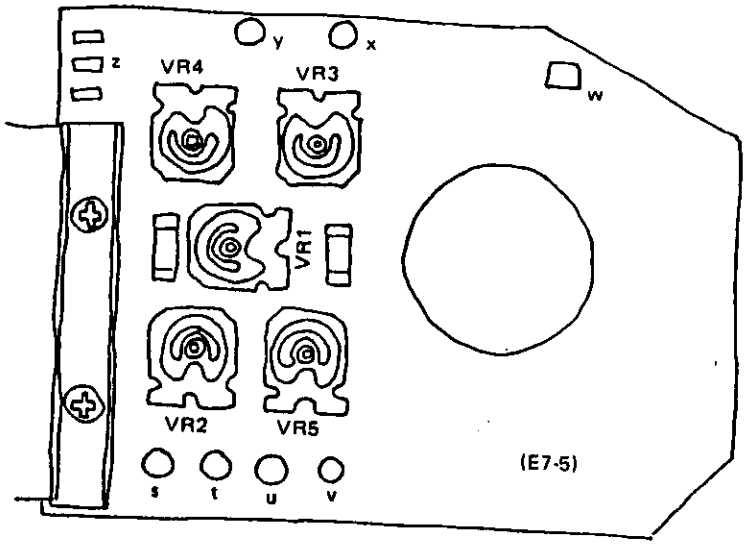
- Set film speed selector to ASA100, and set aperture selector ring of an F1.6/55mm lens to F5.6.
- Adjust variable resistor VR3 properly so that voltage at terminal V_{SF} is 1.300±0.005V.

4) Adjustment of exposure value

- Set each control as shown below.

Shutter speed selector dial ..... AE
ASA selector 100
Aperture selector F5.6
Light source LV11

- Release the shutter, and adjust variable resistor VR4 so that exposure value is $0.08^{+0.02}_{-0}$ lx-sec.



Light source

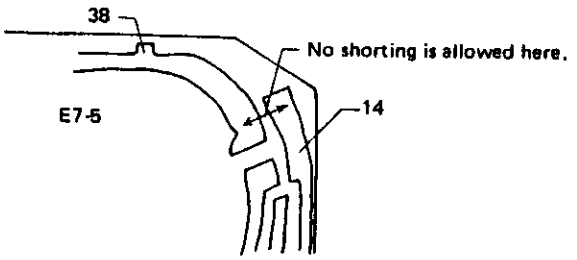
Light value	Standard exposure	Rating
LV 7 (89.7 rlx)	0.08 lx-sec	±1EV
LV11 (718 rlx)	0.08 lx-sec	±1EV
LV14 (5740 rlx)	0.08 lx-sec	±1EV
LV15 (11480 rlx)	0.08 lx-sec	±1EV

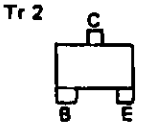
Variable resistor adjusting method

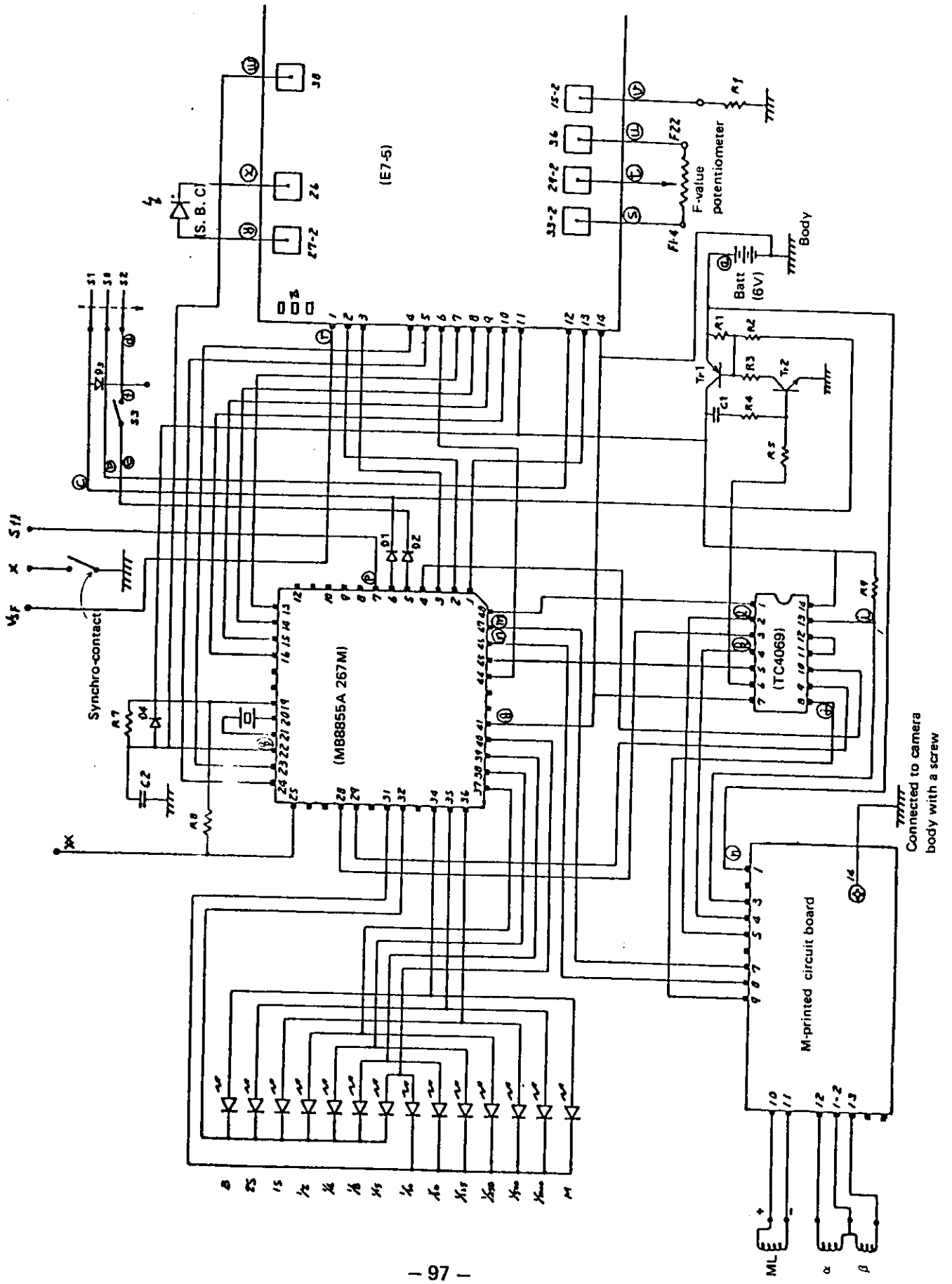
Adjusting sequence	Purpose of adjustment	VR symbol	Checked terminal	Adjusted to
1	Reference voltage	VR1	E7-5: Ⓩ	2.500±0.01V Adjusted completely at the plant
2	Exposure step value	VR5		±1/3EV/410EV Adjusted completely at the plant
3	Aperture step value	VR2	E7-5 : ⓢ - ⓤ	Adjust to 0.960±0.005V
4	VSF voltage	VR3	F. P. C: ⓡ	Adjust to 1.300±0.005V
5	Exposure value	VR4		Adjust to 0.08 $^{+0.02}_{-0}$ l xsec.

15 - 4 Terminal and pin descriptions for IC (MB8855A)

<table>
<tr><th>Pin No.</th><th>Function</th><th>Rating</th></tr>
<tr><td>1</td><td>Self-timer switch</td><td>At self-timer mode . . . About 0[V]
Other than self-timer mode . . . 1/2 Vw or more</td></tr>
<tr><td>2</td><td>A/D converter circuit</td><td></td></tr>
<tr><td>3</td><td>A/D converter circuit</td><td></td></tr>
<tr><td>4</td><td></td><td></td></tr>
<tr><td>5</td><td>S_2 (Shutter start)</td><td>S_2 OFF (Normally) . . . Vw is output.
Shutter start (S_2 ON) . . . About 0.7[V] or less</td></tr>
<tr><td>6</td><td>S1 (Power switch)</td><td>S1 OFF . . . About Vcc
S1 ON . . . 0[V]</td></tr>
<tr><td>7</td><td>Sfl (Flash mode changeover switch)</td><td>Normally (other than flash mode) . . . About Vcc-1[V]
At flash mode . . . 0.3[V] or less</td></tr>
<tr><td>8</td><td>T-value data terminal</td><td rowspan="5"><table>
<tr><th>Pin 12</th><th>Pin 10</th><th>Pin 9</th><th>Pin 8</th><th></th></tr>
<tr><td>O</td><td>O</td><td>O</td><td>1</td><td>B</td></tr>
<tr><td>O</td><td>O</td><td>O</td><td>O</td><td>AEL</td></tr>
<tr><td>O</td><td>O</td><td>1</td><td>O</td><td>AE</td></tr>
<tr><td>O</td><td>1</td><td>1</td><td>O</td><td>2S</td></tr>
<tr><td>O</td><td>1</td><td>O</td><td>O</td><td>1S</td></tr>
<tr><td>O</td><td>1</td><td>O</td><td>1</td><td>1/2</td></tr>
<tr><td>O</td><td>1</td><td>1</td><td>1</td><td>1/4</td></tr>
<tr><td>O</td><td>O</td><td>1</td><td>1</td><td>1/8</td></tr>
<tr><td>1</td><td>O</td><td>1</td><td>1</td><td>1/15</td></tr>
<tr><td>1</td><td>O</td><td>1</td><td>O</td><td>1/30</td></tr>
<tr><td>1</td><td>O</td><td>O</td><td>O</td><td>1/60</td></tr>
<tr><td>1</td><td>O</td><td>O</td><td>1</td><td>1/125</td></tr>
<tr><td>1</td><td>1</td><td>O</td><td>1</td><td>1/250</td></tr>
<tr><td>1</td><td>1</td><td>O</td><td>O</td><td>1/500</td></tr>
<tr><td>1</td><td>1</td><td>1</td><td>O</td><td>1/1000</td></tr>
</table>
O . . . about 0[V]
1 . . . 1/2 Vw or more</td></tr>
<tr><td>9</td><td>Same as above</td></tr>
<tr><td>10</td><td>Same as above</td></tr>
<tr><td>12</td><td>Same as above</td></tr>
</table>

Pin No.	Function	Rating
13	A/D converter circuit	
14	A/D converter circuit	
15	A/D converter circuit	
16	A/D converter circuit	
19	Vw (Circuit power supply)	S1 OFF . . . 0[V] S1 ON . . . About Vcc-0.5[V]
20	Oscillator circuit	Crystal oscillator installing terminal
21	Same as above	Same as above
22	Reset circuit	The circuit is forcedly reset by shorting this circuit with the ground when the main switch is turned off. Normally, the output is above 1/2Vw or more. When this voltage drops below 1/2Vw, all the functions stop. Even if an erroneous operation occurs, turn off the power switch. Then, the reset function actuates, causing the system to reset to the original start position. ○ The brush portion of the circuit (E7-5) should not be shorted. 
23	A/D converter circuit	
24	A/D converter circuit	
25	ADJ	Normally, 1/2Vw or more. Does not function normally when voltage at this terminal drops below 1/2Vw.
28		
29		

Pin No.	Function	Rating
31	LED terminal (GND)	
32	LED terminal (GND)	
34	LED terminal	B M
35	LED terminal	2S 1/1000
36	LED terminal	1S 1/500
37	LED terminal	1/2 1/250
38	LED terminal	1/4 1/125
39	LED terminal	1/8 1/60
40	LED terminal	1/15 1/30
41	GND	
44	A/D converter circuit	
45	Self-holding circuit	Normaly [H] ; When released [L] 8855A Pin# 45 → TC4069 Pin#5 → TC4069 Pin# 6 TC4069 Pin #b . . . Normally [L] When released [H]  E . . . GND B . . . Normally 0[V] When released 0.6 ~ 0.8 [V] C . . . Normally, about Vcc When released, 1[V] or less
46	1st shutter blind starts (α)	When held: 1[V] or more When started: 0.3[V] or less
47	2nd shutter blind starts (β)	Same as above
48	Mirror starts (ML)	Normally: Vw ; When released [L] . . . About 0 [V] 8855A Pin#48 → TC4069 Pin #1 → TC4069 Pin #2 → (M-circuit board assembly #5) Normally 0.3[V] or less When released, 1[V] or more.

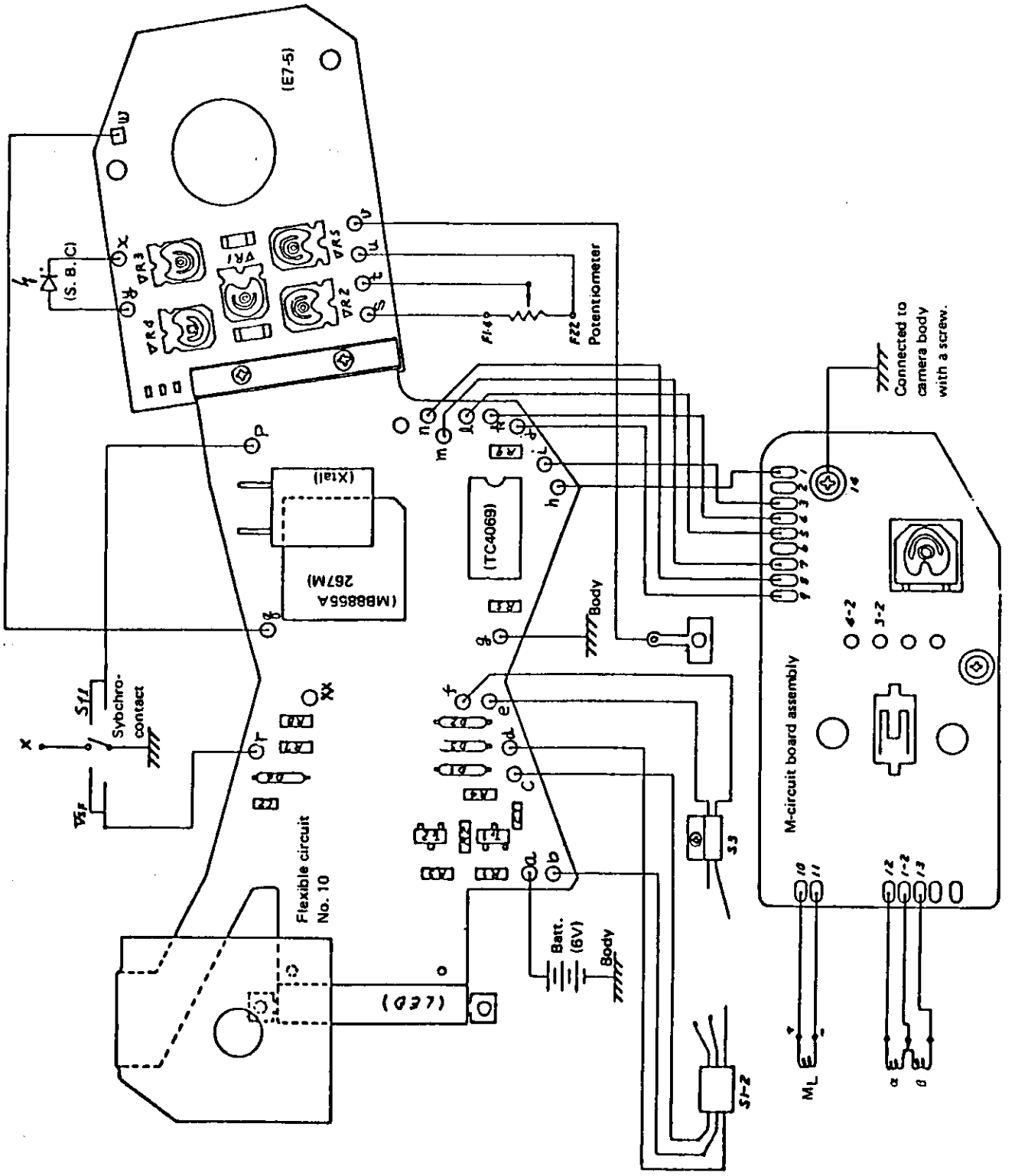

(E7-5)
S.B.C
F-value potentiometer
Body
Batt (6V)
(MB8855A 267M)
(TC4069)
Synchro-contact
M-printed circuit board
Connected to camera body with a screw
ML

Terminal description for amplifier assembly (flexible printed circuit board) (2-13B)

Terminal Symbol	Terminal Name
a	Battery (+)
b	S0 switch terminal
c	S1 switch terminal
d	S2 switch terminal
e	S3 switch terminal
f	S3 switch terminal
g	Ground
h	Power supply (+)
i	MD terminal
j	Buzzer signal terminal
k	Winder start signal terminal
l	Mirror start signal terminal
m	2nd shutter blind start (β) terminal
n	1st shutter blind start (α) terminal
p	Sfl (strobo mode switch) terminal
q	Reset circuit terminal
r	V_{SF} output terminal
s	F-value potentiometer terminal (F1.4)
t	Same as above
u	F-value potentiometer terminal (F22)
v	Lens full aperture resistor terminal
w	Reset circuit terminal
x	Photocell terminal (+)
y	Photocell terminal (−)

Terminal description for M-circuit board assembly (2-64)

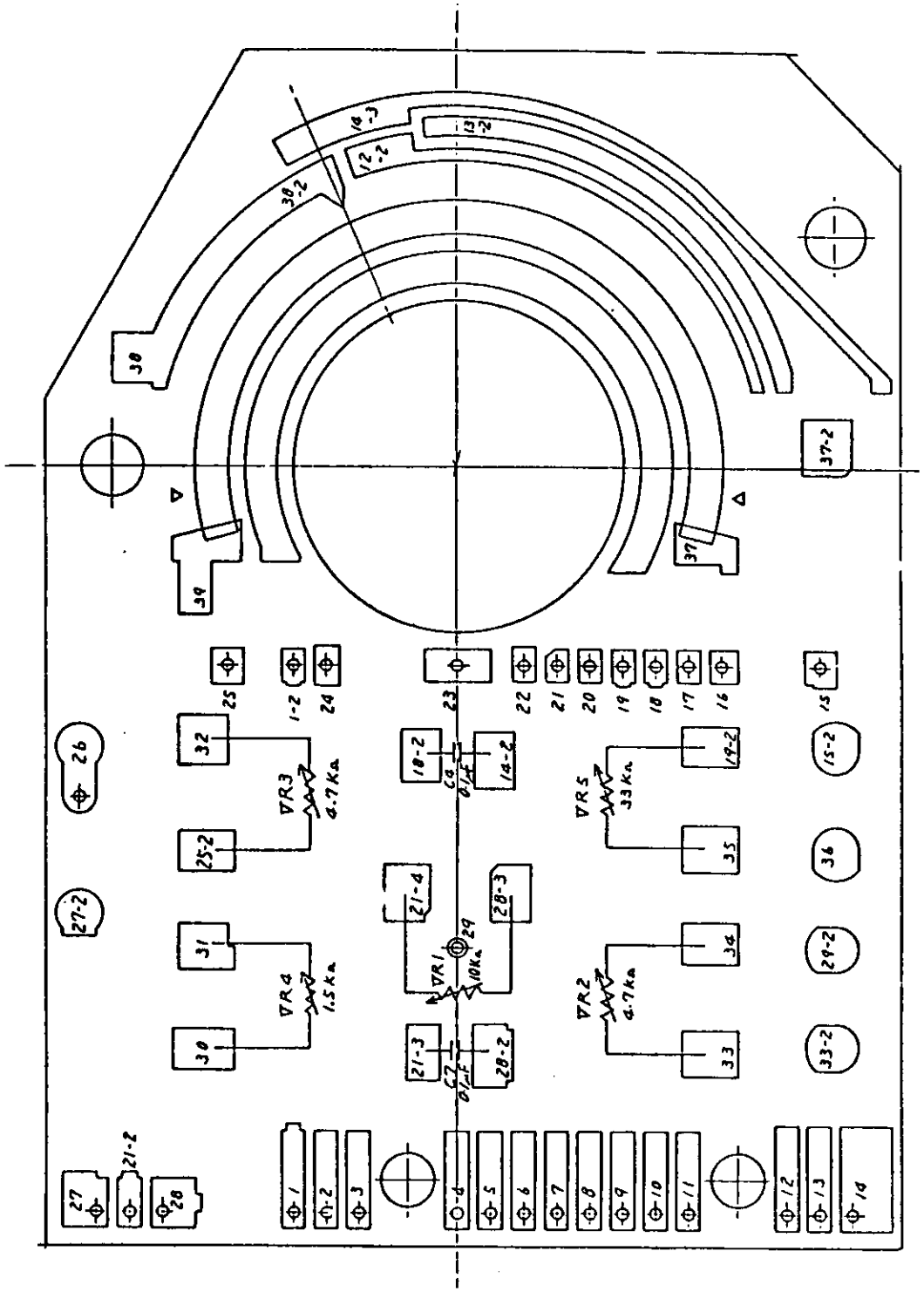
Terminal No.	Terminal Name
1	Power supply (+) (Vcc)
3	Shutter start signal output terminal (MD) (With winder attached)
4	Winder start signal input (END)
5	Mirror start (ML)
7	2nd shutter blind start (β)
8	1st shutter blind start (α)
9	Buzzer signal (STS)
10	Mirror magnet terminal
11	Same as above
12	1st shutter blind magnet terminal
13	2nd shutter blind magnet terminal
14	Ground

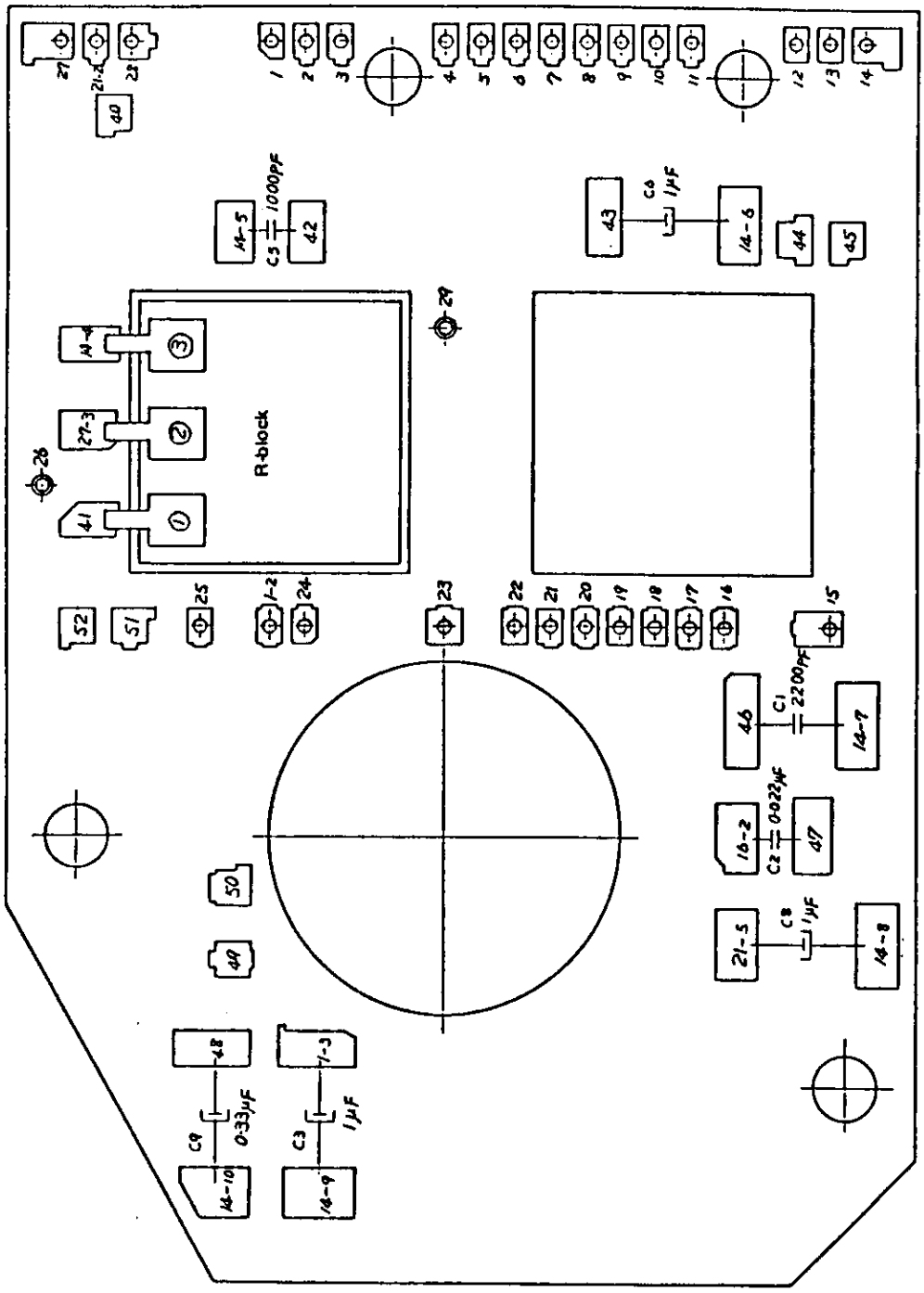

(E7-5)
(S. B. C)
VR1
VR2
VR3
VR4
VR5
Potentiometer
(Xtal)
(MB8856A
267M)
(TC4069)
Body
Connected to
camera body
with a screw.
M-circuit board assembly
Sychro-
contact
Flexible circuit
No. 10
Batt.
(6V)
Body
S3
S1-2
ML

Terminal description for E7 circuit assembly (2-7B)

Terminal No.	Function	Rating
1	Vsf (strobo control voltage)	1.3V with a F1.6/50mm lens set to F5.6 and ASA100.
1-2		
2	A/D converter circuit	Normal waveform
3	A/D converter circuit	Normal waveform
4	A/D converter circuit	Normal waveform
5	A/D converter circuit	Normal waveform
6	A/D converter circuit	Normal waveform
7	A/D converter circuit	Normal waveform
8	A/D converter circuit	Normal waveform
9	A/D converter circuit	Normal waveform
10	A/D converter circuit	Normal waveform
11	Vw (Circuit power supply)	About Vcc-0.5[V]
12	S0	When turned off . . . Open When turned on . . . 0[V]
13	Self-timer switch	Normally, about 1/2Vw or more When self-timer is operating, about 0[V]
14	GND	
15	F0 (Lens full open value) Input	F8 lens . . . 0[V]
15-2		F1.0 lens . . . 0.48[V]
17		About 0.8[V]
18	LV. S. F. terminal	40mV/EV . . . 0.9 ~ 1.8[V] 1/1000 . . . 1.1[V] 2S . . . . . 1.54[V]
19		About 2.1[V] . . . Changed by VR5
20		About 1.1[V]
21	Reference voltage	2.50[V]
21-2		

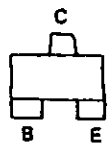
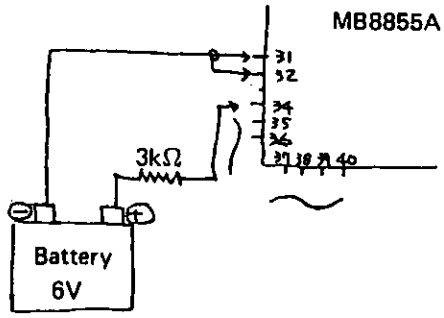
Terminal No.	Function	Rating
22	S-value input	80mV/EV S25 . . . About 1.6V S100 . . . About 1.44V S400 . . . About 1.24V
24	LV. S. F. terminal	Same as terminal #18
29-2	F-value input	80mV/EV (With an F1.6/50mm lens attached) F1.6 . . . . . About 1[V] F5.6 . . . . . About 1.42[V] F16 . . . . . About 1.66[V]
41	Photo amp out	40mV/EV (With an F1.6/50mm lens attached) LV2 . . . About 0.9[V] LV11 . . . About 0.54[V] LV15 . . . About 0.38[V]


VR1
10KΩ
VR2
4.7KΩ
VR3
4.7KΩ
VR4
1.5KΩ
VR5
33KΩ
C6
0.1μF
C7
0.1μF


R-block
C5 1000pF
C6 1μF
C1 2200pF
C2 0.022μF
C8 1μF
C9 0.33μF
C3 1μF

15 - 5 Electrical circuit repairing procedure

1) LED does not light.

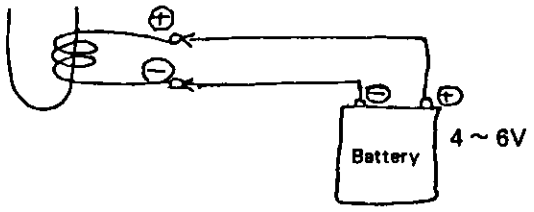
Sequence	Check point	
1	MB8855A : #19	Vw
2	F. P. C : a	Vcc
3	F. P. C : c	S1
4	E7-5 : #12	S0
5	E7-5 : #14	GND
6	F. P. C Trl	Power supply transistor  E = Vcc C = Vw B = S1 OFF. . . About Vcc-0.5V S1 ON . . . About Vcc-0.7V
7	MB8855A : #20	Oscillator circuit (Should be soldered firmly when visually checked)
8	MB8855A : #21	Oscillator circuit (Should be soldered firmly when visually checked)
9	MB8855A : #41	GND
10	MB8855A : #22	Reset
11	LED itself	

Pin 34	B	M
35	2S	1/1000
36	1S	1/500
37	1/2	1/250
38	1/4	1/125
39	1/8	1/60
40	1/35	1/30

2) Shutter does not operate.

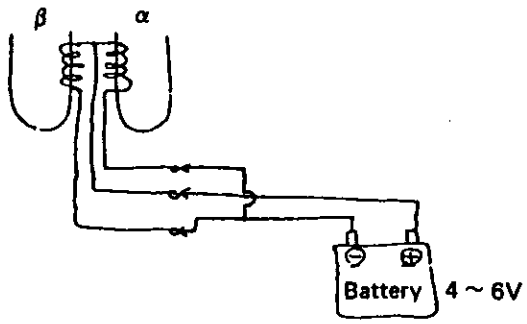
Sequence	Check point	
1	F. P. C : e	S_2
2	MB8855A : #5	Ic, S_2
3	F. P. C : i	Shutter start signal terminal (with winder attached to the camera) Normally, 1/2Vw or more Shutter release is prohibited when voltage is below 1/2Vw.
4	F. P. C : XX	ADJ (Normally 1/2Vw or more. Normal operation cannot be obtained when voltage is below 1/2Vw.)
5	MB8855A : #48	Mirror start MB8855A #18 → TC4069 #1 → CT4069 #2 → F. P. C 1 → M-circuit board assembly (2-64) M-circuit board assembly (2-64) #10 Normally, 0.3V or less When released. 1V or more .
6	MB8855A : #46	1st shutter blind start.
7	MB8855A : #47	2nd shutter blind start.
8	MB8855A : #45	Self-holding circuit

○ Checking ML magnet alone



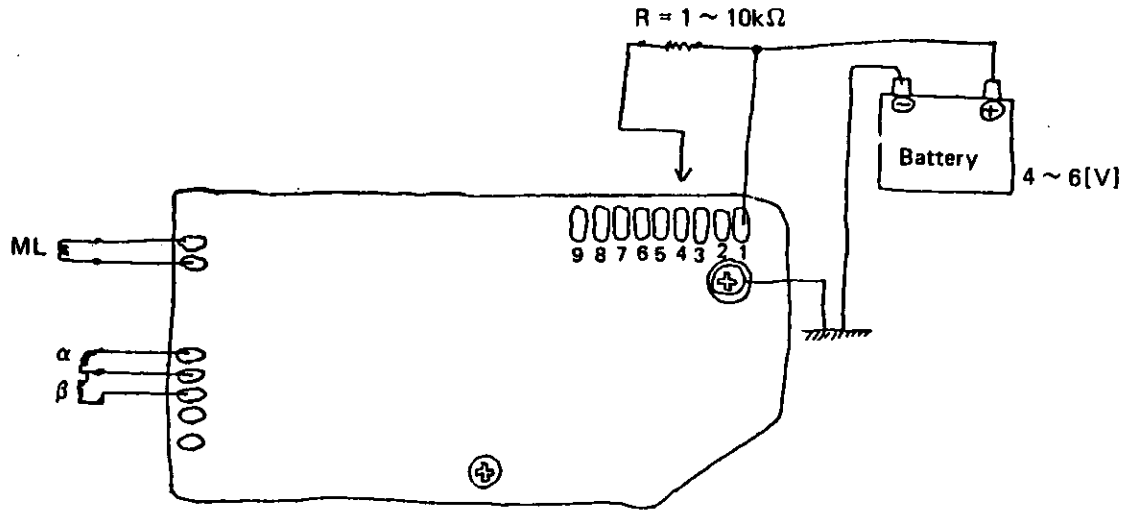
After winding up the film advance lever completely, apply voltage to the lead wires of the ML magnet as shown above. When the mirror starts, the ML magnet is normal.

○ Checking α-β magnet alone



Apply voltage to the lead wires of the α-β magnet as shown in the left hand figure. When the moving contact is held completely, the α-β magnet is normal.

○ Checking M-circuit board assembly (2-64) alone



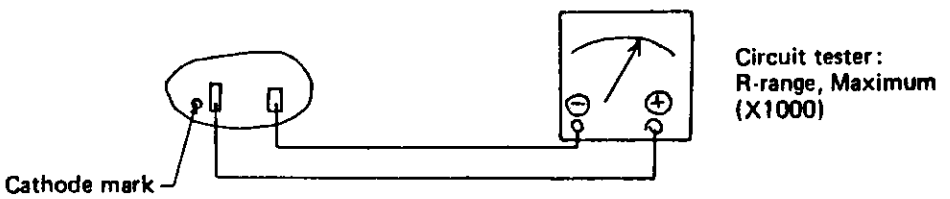
ML magnet circuit : After winding up the film advance lever completely, apply voltage to terminal #4. When the mirror starts, the ML magnet circuit is normal.

α-β magnet circuit : After winding up the film advance lever completely, apply voltage to terminals #6 and #7. When the moving contact is held completely, the α-β magnet circuit is normal.

3) LED and shutter do not operate normally.

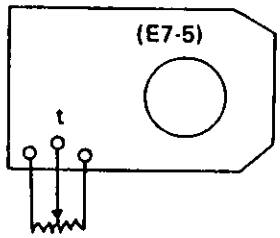
Sequence	Check point	
1	MB8855A : #8	Check the brush in the contact base assembly (2-52A) when voltage is abnormal.
	MB8855A : #9	Check the brush in the contact base assembly (2-52A) when voltage is abnormal.
	MB8855A : #10	Check the brush in the contact base assembly (2-52A) when voltage is abnormal.
	MB8855A : #12	Check the brush in the contact base assembly (2-52A) when voltage is abnormal.
2	E7-5 : #21 #21-2	Vref (Reference voltage): Parts to be checked when abnormal are C5 (1000PF) C7 (0.1μF), C8 (1μF), VR1 (10kΩ)
3	E7-5 : #24	LV, S & F (40mV/EV change) Parts to be checked when abnormal: R-block C4 (0.1μF), C9 (0.33μF), C6 (1μF) VR4 (1.5kΩ), VR2 (4.7kΩ) (F-value potentiometer, silicon cell and ASA brush.)

○ Checking slicon cell for function



Connect a circuit tester to the silicon cell as shown above, and make sure that the resistance is low. Next, reverse the tester connections, and make sure that the resistance is high. Through these tests, open and close the face of the slicon cell, and make sure that the pointer of the circuit tester deflects accordingly.

○ Checking F-value potentiometer



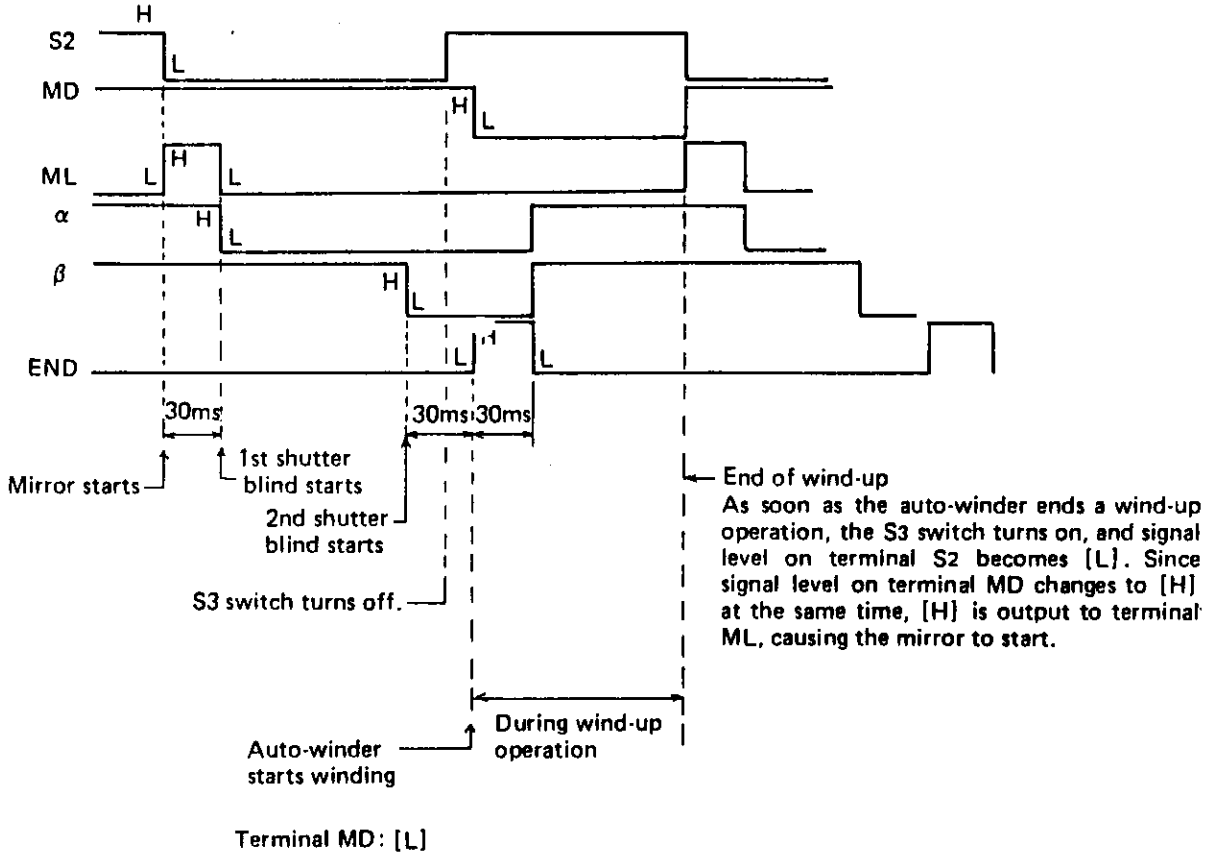
With the F-value potentiometer connected to the camera, turn the aperture selector ring, and make sure that voltage at terminal t changes from about 1.0 to 1.8[V]. Normally, voltage changes 80mV per EV, and voltage is lower at F1.4 side.

○ Checking battery checker

For battery checker function, the LED at bulb position flashes (4 Hz duty 1/2) when voltage at terminal #11 of the E7 circuit assembly (2-7B) is about 4.2V. When the LED does not flash correctly, check voltage at terminal #21 of the E7 circuit assembly (2-7B). It should be 2.50[V].

4) Auto-Winder does not operate normally

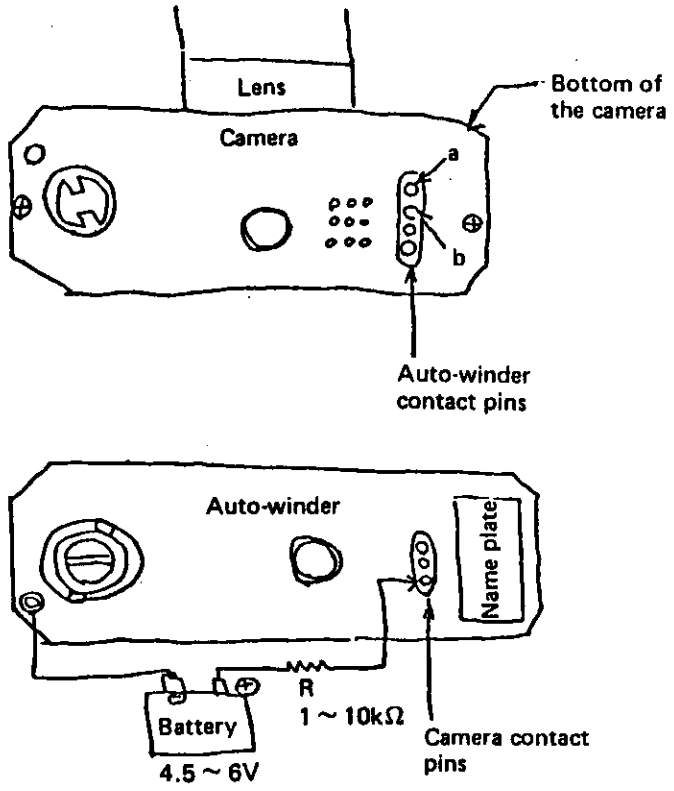
Sequence	Check point	
1	Amplifier assembly (2-13B) : e	(S2)
2	Amplifier assembly (2-13B) : l	(ML)
3	Amplifier assembly (2-13B) : i	(MD)
4	Amplifier assembly (2-13B) : k	(END) [H] signal is output for 30 msec. after the 2nd shutter blind starts.
5	Amplifier assembly (2-13B) : m	(β)
6	Amplifier assembly (2-13B) : n	(α)


S2
MD
ML
α
β
END
H
L
30ms
30ms
30ms
Mirror starts
1st shutter blind starts
2nd shutter blind starts
S3 switch turns off.
Auto-winder starts winding
During wind-up operation
End of wind-up
As soon as the auto-winder ends a wind-up operation, the S3 switch turns on, and signal level on terminal S2 becomes [L]. Since signal level on terminal MD changes to [H] at the same time, [H] is output to terminal ML, causing the mirror to start.

Terminal MD: [L]

NOTE:

When the camera does not operate correctly with an auto-winder combined with the camera, the following simple method may be used to check the camera and auto-winder.



○ Checking camera

(1) Make sure that the loaded battery has a sufficient voltage.

(2) Dismount the auto-winder.

(3) Ground the auto-winder contact pin "b" on the camera (connect the contact pin "b" to the camera body) after winding up the film advance lever completely.

(4) Now, depress the shutter release button deeply, and make sure that the shutter does not start.

(5) Next, with the shutter release button depressed deeply, unground the contact pin "b" (disconnect the contact pin "b" from the camera body), and make sure that the shutter starts.

o Checking auto-winder

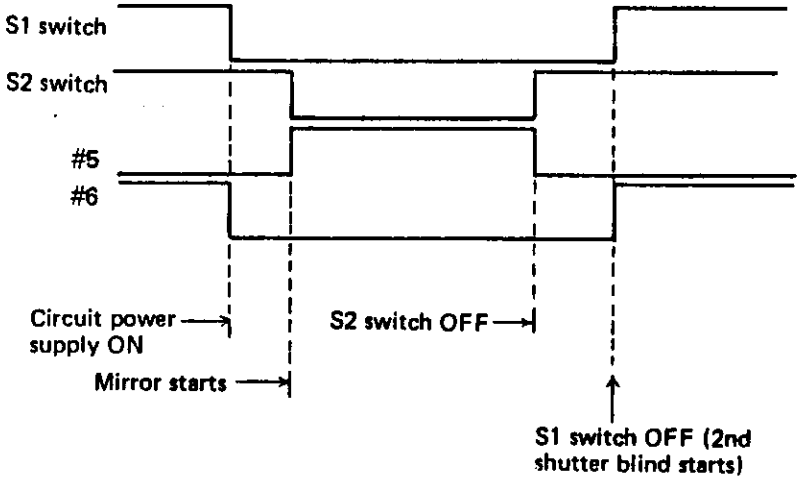
(1) Make sure that the used battery has a sufficient voltage.

(2) Set the switch to "CONT".

(3) Apply voltage to the auto-winder from an externally located battery as shown above, and make sure that the auto-winder starts.
(Be sure to connect a 1 to 10 kΩ resistor as shown above.)

5) Bulb "B" cannot be set.

Sequence	Check point	
1	MB8855A : #8	[H] must be output. When abnormal, check the brush on the contact base assembly (2-52A)
	MB8855A : #9	[L] must be output. When abnormal, check the brush on the contact base assembly (2-52A)
	MB8855A : #10	Same as above.
	MB8855A : #12	Same as above.
2	MB8855A : #6	Power switch (S1)
	: #5	Shutter start (S2)



6) Self-timer does not operate normally.

Sequence	Check point	
1	MB855A : #1	Self-timer switch: Check the brush on the contact base assembly (2-52A)
2	M-circuit board assembly (2-64) : #9	Buzzer signal

7) Flash does not operate normally.

Sequence	Check point	
1	MB8855A : #7	Flash set input
2	Amplifier assembly (2-13B) : r	Strobo control voltage.

16. Installing top cover assembly (1 - 1)

a. Set position of the S - brush assembly (2 - 2) to "ON".

b. Match the switch lever (1 - 20) of the top cover assembly (1 - 1) to the "ON" position.

c. Connect synchro - cord (6 - 119) to the contact piece (1 - 30) by soldering.

d. Combine the film rewind button (1 - 78) with the top cover.

e. Place the top cover assembly (1 - 1) on the camera body carefully so that no lead wire is held between them.

f. Tighten six screws (1 - 41).

g. Install the film advance lever assembly (1 - 45).

NOTE: Adjust number of washers (1 - 49) properly so that the film advance lever (1 - 46) does not drag on the top cover.

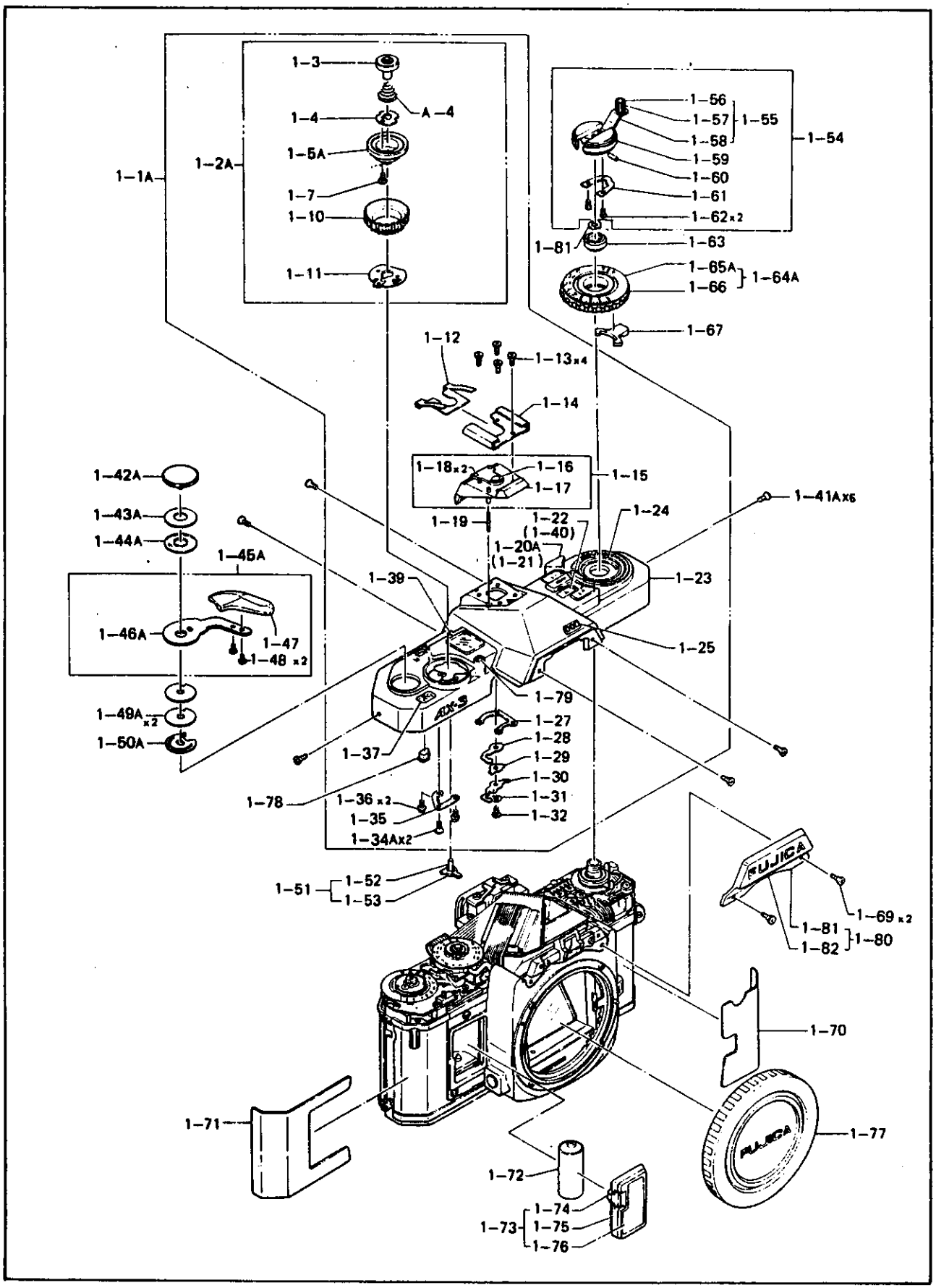
h. Install the film speed selector assembly (1 - 64) by matching it with the A - brush assembly (2 - 4).

i. Load a battery, depress the shutter release button (1 - 3) in a half way and make sure that the LED lights.
In this case, the shutter should not be released.
When adjustment is required, properly bend the S1 - S2 switch (2 - 61).

j. Set the switch lever (1 - 20) to "SELF", release the shutter and make sure that the self - timer operates correctly.
While the self - timer is operating, the buzzer sounds intermittently when the bottom cover (2 - 70) has been installed on the camera body.

k. Set the shutter dial (1 - 10) to "AE" and "AEL" and make sure that it is locked at these positions.
Next, turn the shutter dial with the lock release button (1 - 79) depressed, and make sure that the shutter dial can be turned.

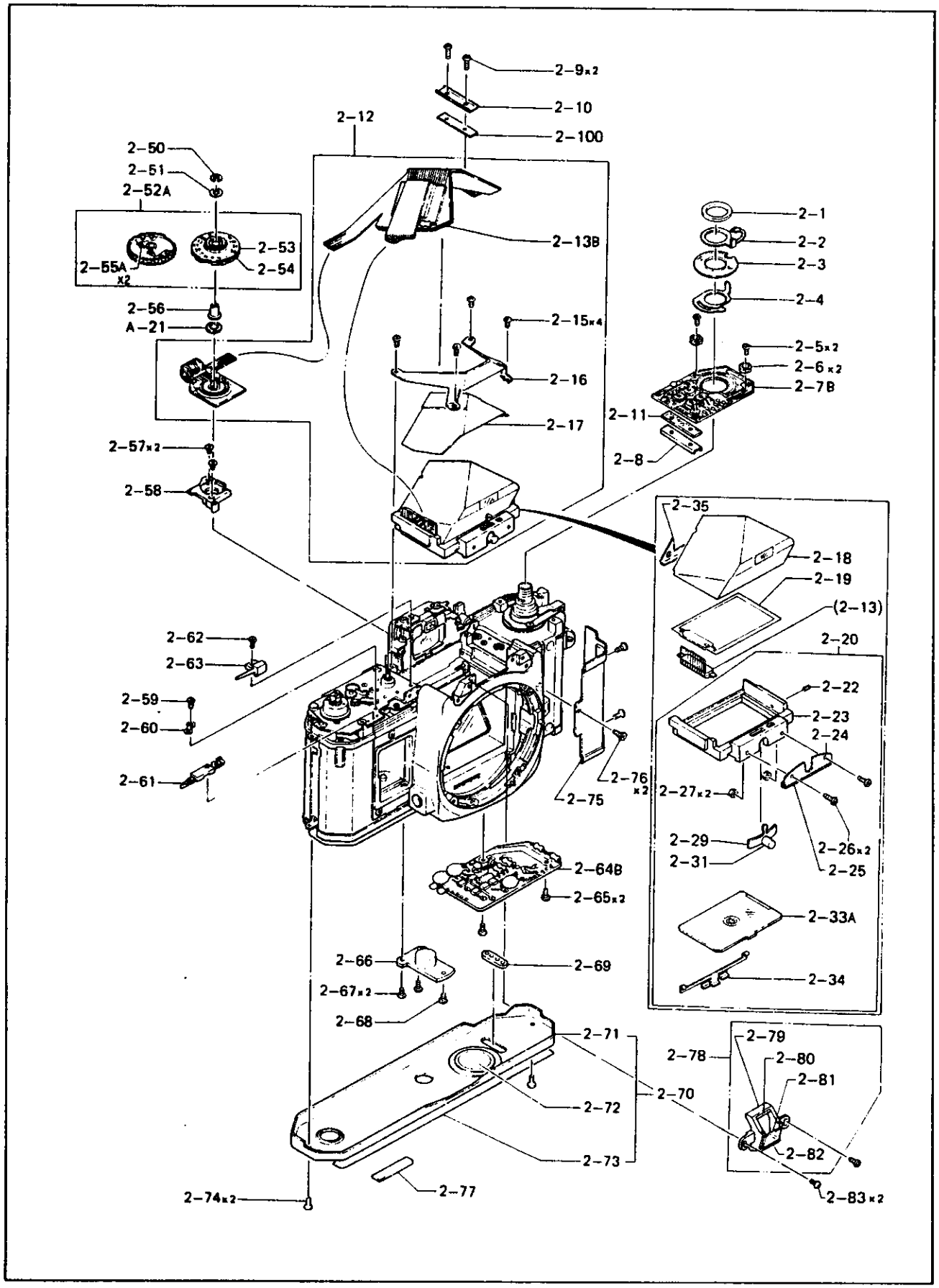
Fig. 76


1-3
A-4
1-4
1-5A
1-2A
1-1A
1-7
1-10
1-11
1-56
1-57
1-55
1-58
1-54
1-59
1-60
1-61
1-62x2
1-81
1-63
1-65A
1-66
1-64A
1-67
1-12
1-13x4
1-14
1-18x2
1-16
1-17
1-15
1-19
1-22
(1-40)
1-20A
(1-21)
1-24
1-41Ax5
1-42A
1-43A
1-44A
1-45A
1-39
1-23
1-46A
1-47
1-48x2
1-25
1-49Ax2
1-50A
1-79
1-27
1-28
1-29
1-30
1-31
1-32
1-37
1-78
1-36x2
1-35
1-34Ax2
1-51
1-52
1-53
FUJICA
1-69x2
1-81
1-82
1-80
1-70
1-71
1-77
1-72
1-74
1-73
1-75
1-76

17. Installing bottom cover (2-70)

- Check the buzzer (2-72) to insure that it is correctly grounded on the bottom cover (2-71).
- Make sure that the buzzer (2-72) and M-circuit board assembly (2-64) come into a firm contact. When this contact is unsatisfactory, the intermittent buzzer sound will not be generated.
- Check the Auto-Winder connecting pin to insure that it is not rusted.

Fig. 77


2-9x2
2-10
2-100
2-12
2-50
2-51
2-52A
2-53
2-54
2-55A x2
2-13B
2-1
2-2
2-3
2-4
2-56
A-21
2-15x4
2-16
2-17
2-5x2
2-6x2
2-7B
2-11
2-8
2-57x2
2-58
2-35
2-18
2-19
(2-13)
2-20
2-62
2-63
2-59
2-60
2-61
2-22
2-23
2-24
2-76 x2
2-75
2-27x2
2-29
2-31
2-26x2
2-25
2-64B
2-65x2
2-33A
2-34
2-66
2-67x2
2-68
2-69
2-71
2-72
2-70
2-73
2-74x2
2-77
2-78
2-79
2-80
2-81
2-82
2-83x2

Ⅳ INSPECTION

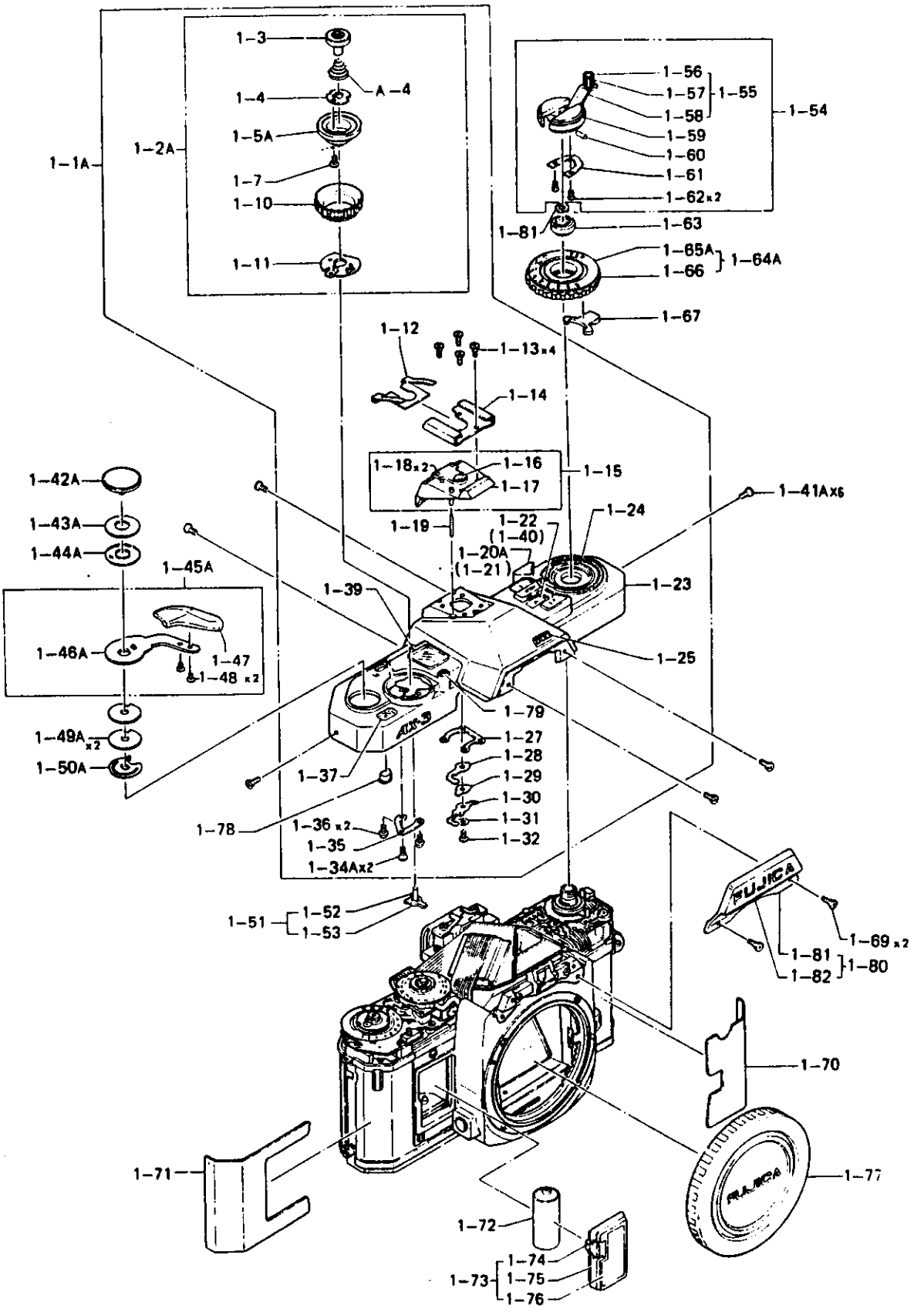
INSPECTION POINT	METHOD OF INSPECTION	REMARKS
1. Electrical system	Apply the rated power (4G13, 544 or 4SR44 battery), and mount an F1.6/55 mm lens on the camera.	
1-1 Switch lever	ON: Make sure that the shutter can be released. OFF: Make sure that the shutter cannot be released. SELF: Make sure that the self-timer operates and intermittent buzzer sound is generated correctly.	
1-2 LED display in the viewfinder	○ Make sure that the "M" mode character can be seen when shutter speed is set to "2S" through 1000. Make sure that this "M" mode character goes out when the shutter dial is set to "AE", "AEL" or "B". ○ Make sure that the appropriate LED light as the shutter dial is set to manual (2S to 1/1000). Further, make sure that the LED at a shutter speed obtained as the result of calculations based on the brightness and aperture selected at the combined lens blinks in 8 Hz frequency. ○ Change brightness of the object and/or aperture selected on the combined lens, and make sure that the LED lighting varies accordingly. ○ Set the shutter dial to "AE" or "AEL", and make sure that shutter speed is selected automatically and the LED for the automatically selected shutter speed lights. In this case, however, make sure that even if brightness is changed, the value measured at the first metering is maintained when the shutter dial is set to "AEL".	
1-3 Shutter speed	○ Set the shutter speed selector to "2" or "1", release the shutter, and make sure that exposure is made accordingly. ○ Set shutter speed to 1/1000 sec., release the shutter, and make sure that the shutter blinds run correctly.	

INSPECTION POINT	METHOD OF INSPECTION	REMARKS
1-4 Exposure test	Exposure value can be normally tested by examining position of the shutter speed display LED. When conducting an exposure value test, perform it with accurate luminosities used. The rating is ±1 EV for all exposure values.	
1-5 Checking battery voltage	With a battery of insufficient voltage loaded, make sure that the LED for "B" position blinks in 4 Hz frequency. (This is a battery warning.)	
2. Parts related to camera body		
2-1 Film advance	○ Make sure that the film advance lever can be wound up smoothly. ○ Make sure that the film advance lever returns with a proper weight. ○ Make sure that so called inching can be made when winding up the film advance lever.	
2-2 Film rewind button	Make sure that the sprocket is freed when this button is depressed. Wind up the film advance lever and make sure that the film rewind button resets causing the sprocket to operate.	
2-3 Filming system and film chamber door	○ Load a test film, repeat film advancing, and make sure that the film is advanced correctly. Further, make sure taht the film can be rewound correctly. ○ Load a film, and make sure that the film chamber door can be opened, closed and locked correctly. ○ Make sure that the film chamber door can be installed and removed.	
2-4 Exposure counter	○ Close the film chamber door, wind up the film advance lever and make sure that the exposure counter operates normally from "S". ○ Open the film chamber door, and make sure that the exposure counter resets to "S".	

INSPECTION POINT	METHOD OF INSPECTION	REMARKS
3. Viewfinder 3-1 Coincidence of infinity	Set the focusing ring of the lens to ∞, look at an object in a long distance, and make sure that the split images are matched. A slight overage is permitted but shortage should not exists.	
3-2 Condition of viewfinder	○ Make sure that no dust, scar or others which hinder field of view exist. ○ Make sure that the viewfinder frame is positioned correctly and is not deformed.	
4. Adaptability of Auto-Winder	○ Make sure that Fujica Auto-Winder X can be installed correctly. ○ Make sure that film is advanced one frame by one frame with the Auto-Winder set to "S" and the film is advanced successively with the Auto-Winder set to "C".	
5. Appearance	○ The camera should have neat appearance having no scratch, damage, gap between fitted parts, etc. ○ All parts should have been installed securely and correctly. ○ All parts installed with adhesive should not be peeled off or floated, and adhesive should have not come out from such parts.	
6. Setting of parts after completing the inspection	○ Lens: ∞ ○ Shutter: To be released ○ Battery: Unloaded ○ Switch lever: OFF ○ Exposure counter: S	

V PARTS LIST

Fig. 1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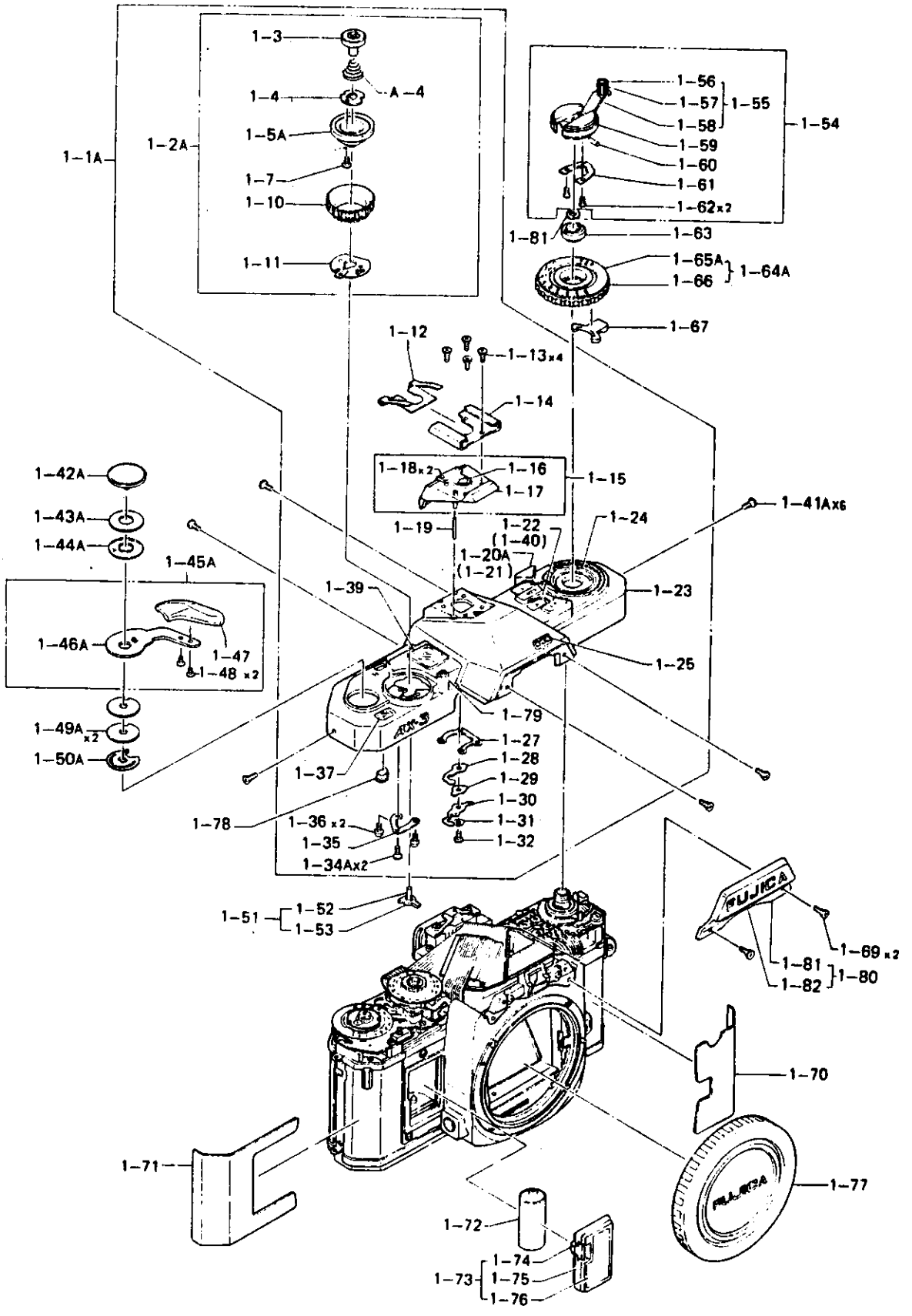
FUJICA
AX-3

REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
1 - 1A	303A2452101	Top cover assembly	1	
1 - 2A	23A2452130	Shutter release button assembly	1	
1 - 3	16B2051160	Shutter release button	1	
1 - 4	85B2051170	Lock plate	1	
1 - 5A	81B2457330	Guide ring collar	1	
1 - 7	110M140201S	Screw	1	
1 - 10	23B2051220	Shutter dial	1	
1 - 11	85B2051240	Stopper	1	
1 - 12	11B2050620	Shoe cover	1	
1 - 13	111M170501N	Screw	4	
1 - 14	41B2050610	Accessor shoe	1	
1 - 15	109A2030610	Contact assembly	1	
1 - 19	17B2050680	Pin	1	
1 - 20A	82B2457241	Switch lever	1	
1 - 21	50B2051070	Auxiliary spring	1	
1 - 22	81B2051050	Window	1	
1 - 24	81B2457230	Adapter	1	
1 - 25	84B2457280	Emblem	1	
1 - 27	85B2050630	Holder	1	
1 - 28	112B2050650	Contact piece	1	
1 - 29	115B2050700	Insulation plate	1	
1 - 30	112B2050660	Contact piece	1	
1 - 31	55B2050670	Washer	1	
1 - 32	53B93480	Screw	1	
1 - 34A	110M140401S	Screw	2	
1 - 35	85B2457160	Holder	1	
1 - 36	110M140351S	Screw	2	
1 - 37	6B2051150	Exposure counter window	1	
1 - 39	6B2457120	Shutter speed indicator window	1	
1 - 40	58B2051030	Seal	1	
1 - 41A	53B2057970	Screw	6	
1 - 42A	53B2054233	Screw	1	

Fig. 1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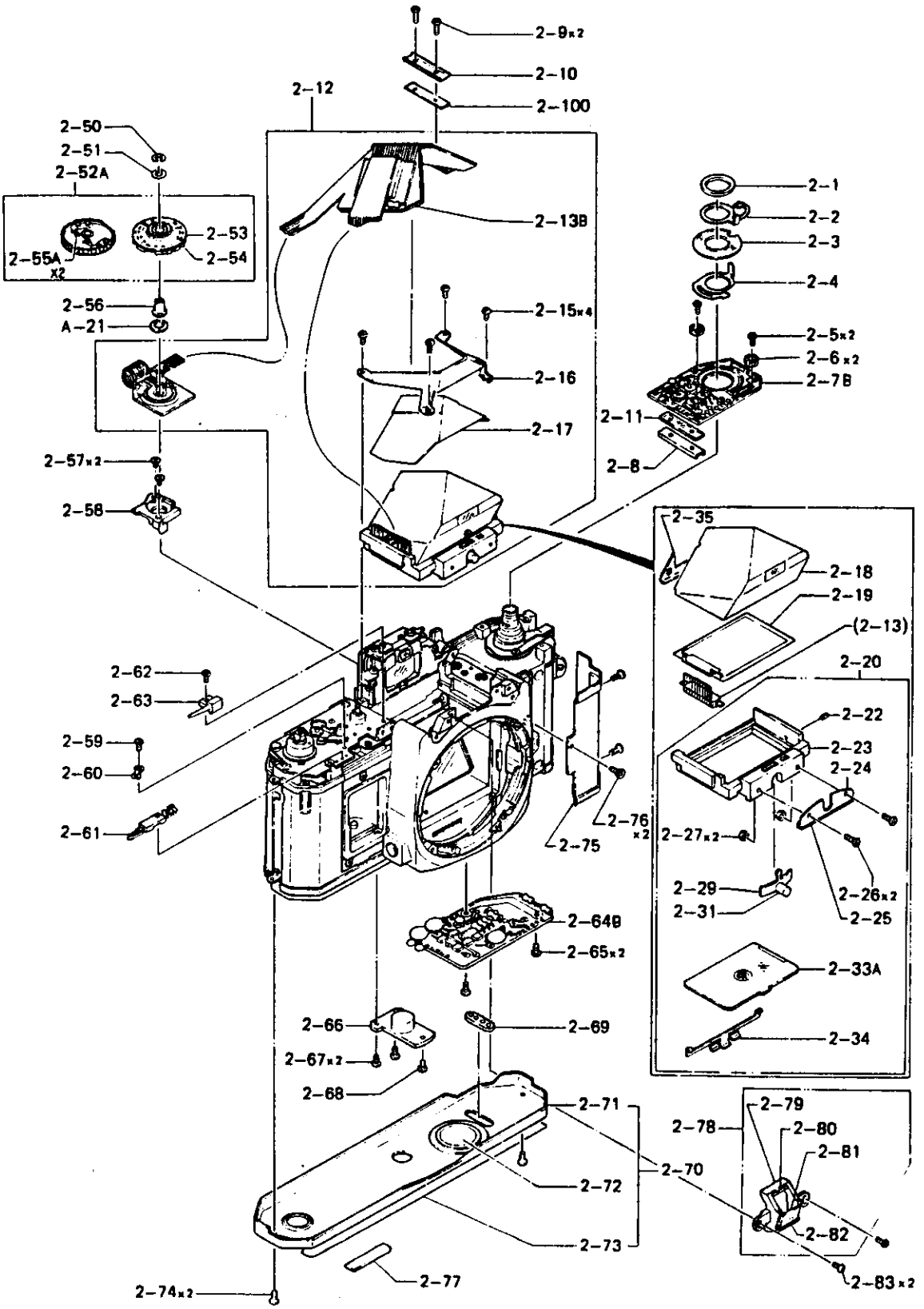
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
1 - 43A	55B2054241	Washer	1	
1 - 44A	50B2054251	Leaf spring	1	
1 - 45A	47A2034211	Film advance lever assembly	1	
1 - 46A	47B2054210	Film advance lever	1	
1 - 47	81B2054220	Knob	1	
1 - 48	113M170401S	Screw	2	
1 - 49A	55B2054262	Washer	2	
1 - 50A	85B2054274	Plate	1	
1 - 51	32A2036470	Relay shaft assembly	1	
1 - 54	16A2037100	Film rewind crank assembly	1	
1 - 55	18A2037120	Film rewind arm assembly	1	
1 - 59	16B2057100	Film rewind knob	1	
1 - 60	32B2057150	Pin	1	
1 - 61	50B2057110	Leaf spring	1	
1 - 62	110M140201S	Screw	2	
1 - 63	23B2057090	Holder	1	
1 - 64A	16A2037061	Film speed selector assembly	1	
1 - 65A	16B2057061	Dial	1	
1 - 66	81B2057070	Selector ring	1	
1 - 67	82B2057080	Lock button	1	
1 - 69	110M170451G	Screw	2	
1 - 70	59B2054400	Leather	1	
1 - 71	59B2054410	Leather	1	
1 - 72	104K20270	Silver oxide battery	1	
1 - 73	12A2038410	Battery compartment cover assembly	1	
1 - 76	59B2058440	Leather	1	
1 - 77	57B2057450	Body cap	1	
1 - 78	16B2056450	Film rewind button	1	
1 - 80	11A2451400	FUJICA name plate assembly	1	
A - 4	50B2051310	Spring	1	
1 - 81	95B2059030	Washer	1	

Fig. 2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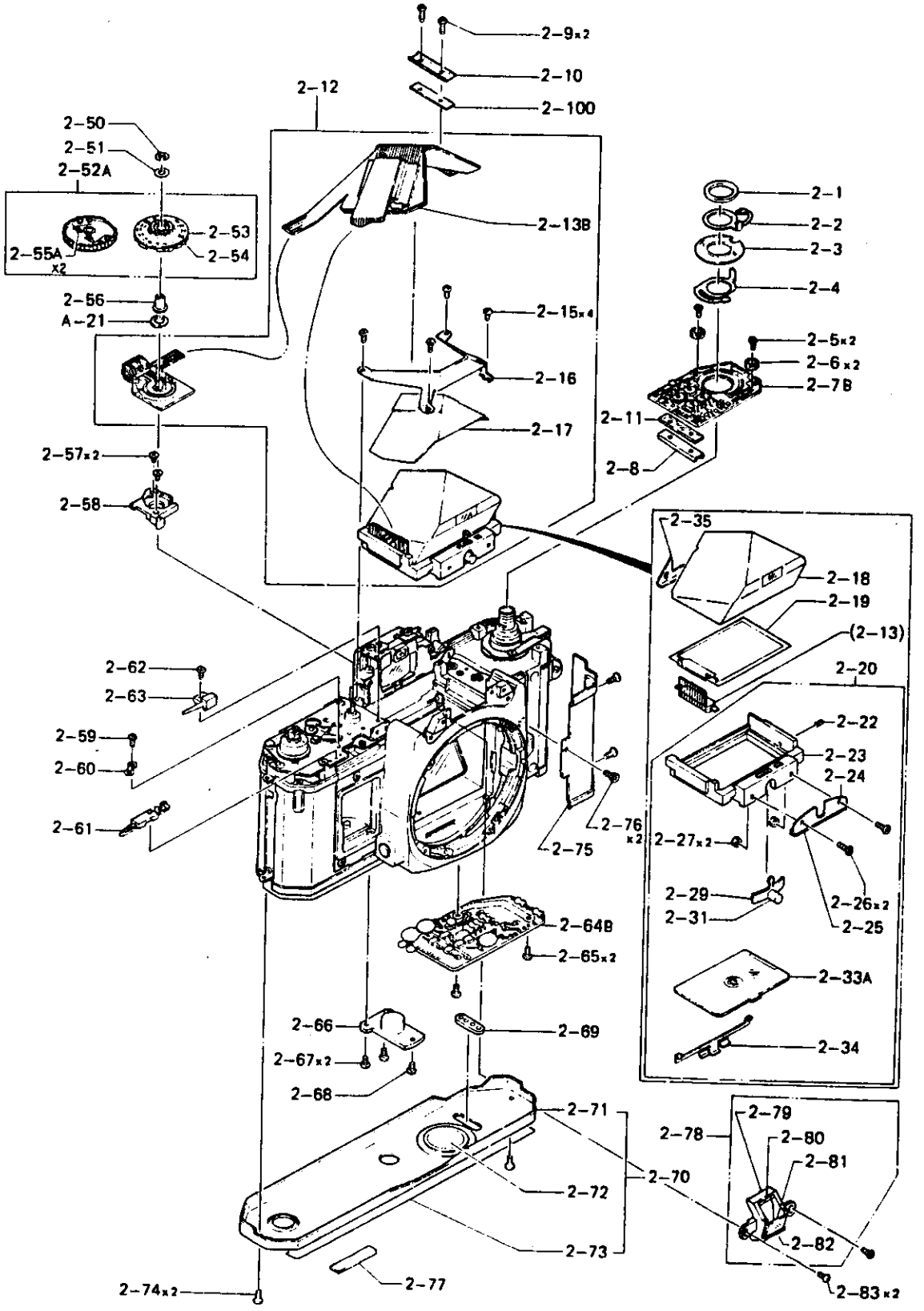
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
2 - 1	23B2057050	Fix ring	1	
2 - 2	109A2037040	S - brush assembly	1	
2 - 3	55B2057030	Insulation plate	1	
2 - 4	109A2037020	A - brush assembly	1	
2 - 5	53K19860	Screw	2	
2 - 6	55B2057910	Rubber ring	2	
2 - 7B	106A2033172	E7 circuit assembly	1	
2 - 8	112B2057360	Channel plate A	1	
2 - 9	110M140401S	Screw	2	
2 - 10	112B2057370	Channel plate B	1	
2 - 11	55B2052611	Insulation plate	1	
2 - 12	12A2451270	Focusing glass assembly	1	
2 - 13B	110A2033210	Amplifier assembly	1	
2 - 15	110M170251S	Screw	4	
2 - 16	85B2055430	Holder	1	
2 - 17	11B2055440	Protection cover	1	
2 - 18	2B2508000	Penta prism	1	
2 - 19	20A2451300	Frame assembly	1	
2 - 22	120M140015S	Screw	1	
2 - 23	12B2046510	Prism case	1	
2 - 24	58B2046550	Cover plate	1	
2 - 25	27B2046590	Moquette	1	
2 - 26	110M140301S	Screw	2	
2 - 27	54B99530	Nut	2	
2 - 29	50B2046570	Spring contact	1	
2 - 31	17B2046580	Contact pin	1	
2 - 33A	5B2352620	Focusing screen	1	
2 - 34	50B2046560	Leaf spring	1	
2 - 35	27B2046640	Light shielding plate	1	
2 - 50	191M012T	E - clip	1	
2 - 51	55B2056100	Washer	1	
2 - 52A	82A2036051	Contach base assembly	1	

Fig. 2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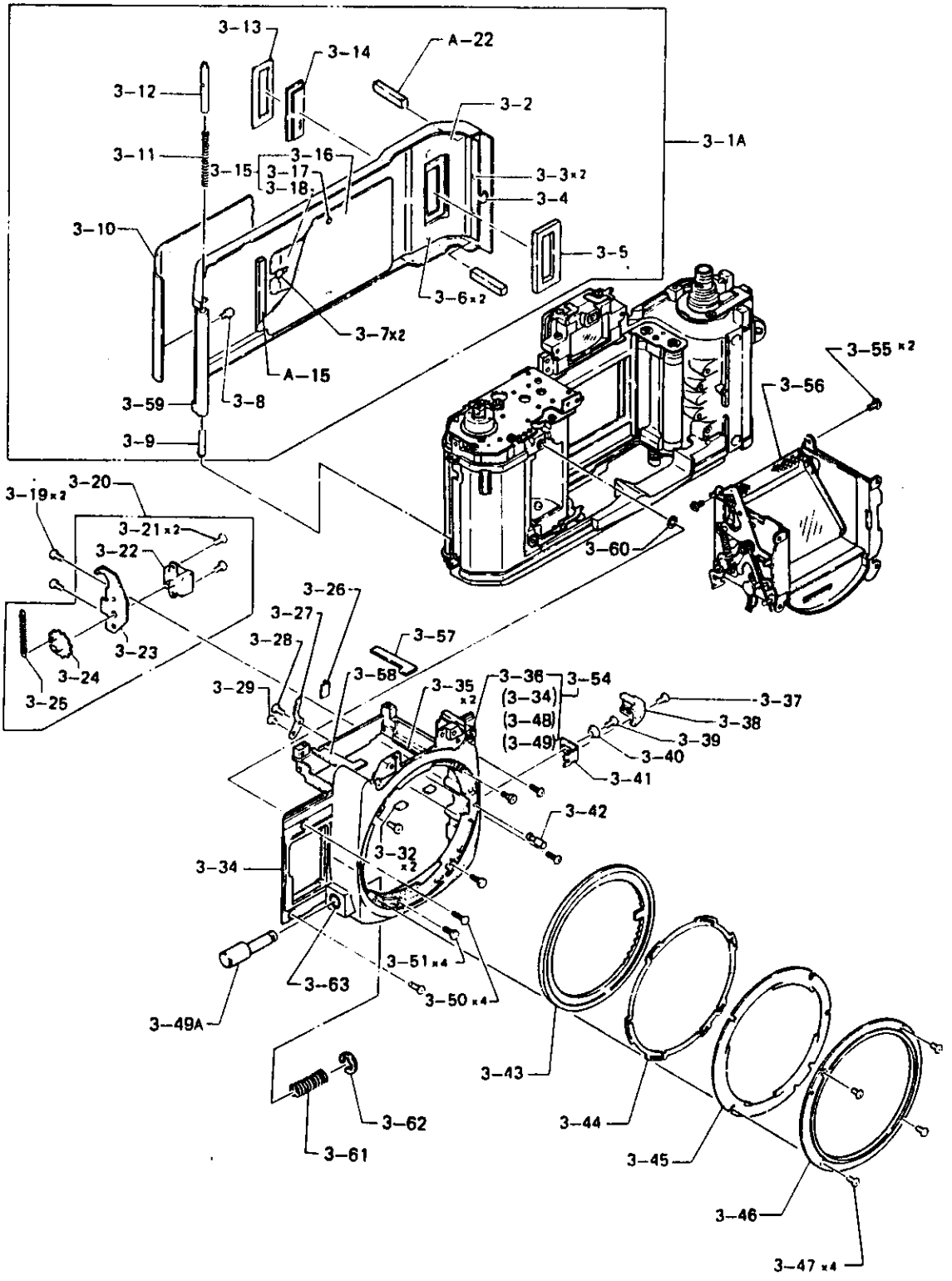
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
2 - 53	58B2056060	Dial plate	1	
2 - 56	54B2056090	Holder	1	
2 - 57	110M170253S	Screw	2	
2 - 58	81B2043880	Base	1	
2 - 59	110M140153S	Screw	1	
2 - 60	85B2056010	Holder	1	
2 - 61	121A2036020	S1 - S2 switch	1	
2 - 62	110M140253S	Screw	1	
2 - 63	121A2036030	S3 switch	1	
2 - 64B	110A2033250	M - circuit board assembly	1	
2 - 65	110M170301N	Screw	2	
2 - 66	53B2054610	Tripod socket	1	
2 - 67	111M170401G	Screw	2	
2 - 68	111M200401G	Screw	1	
2 - 69	115B2057410	Insulation plate	1	
2 - 70	11A2037400	Bottom cover assembly	1	
2 - 73	95B2057424	Tape	1	
2 - 74	111M170301G	Screw	2	
2 - 75	84B2044510	Side cover	1	
2 - 76	111M170301S	Screw	2	
2 - 77	58B2057490	Number plate	1	
2 - 78	84A2451230	Mirror holding frame assembly	1	
2 - 83	110M170401S	Screw	2	
A - 21	95B2053300	Washer	1	
2 - 100	115B2057380	Rubber plate	1	

Fig. 3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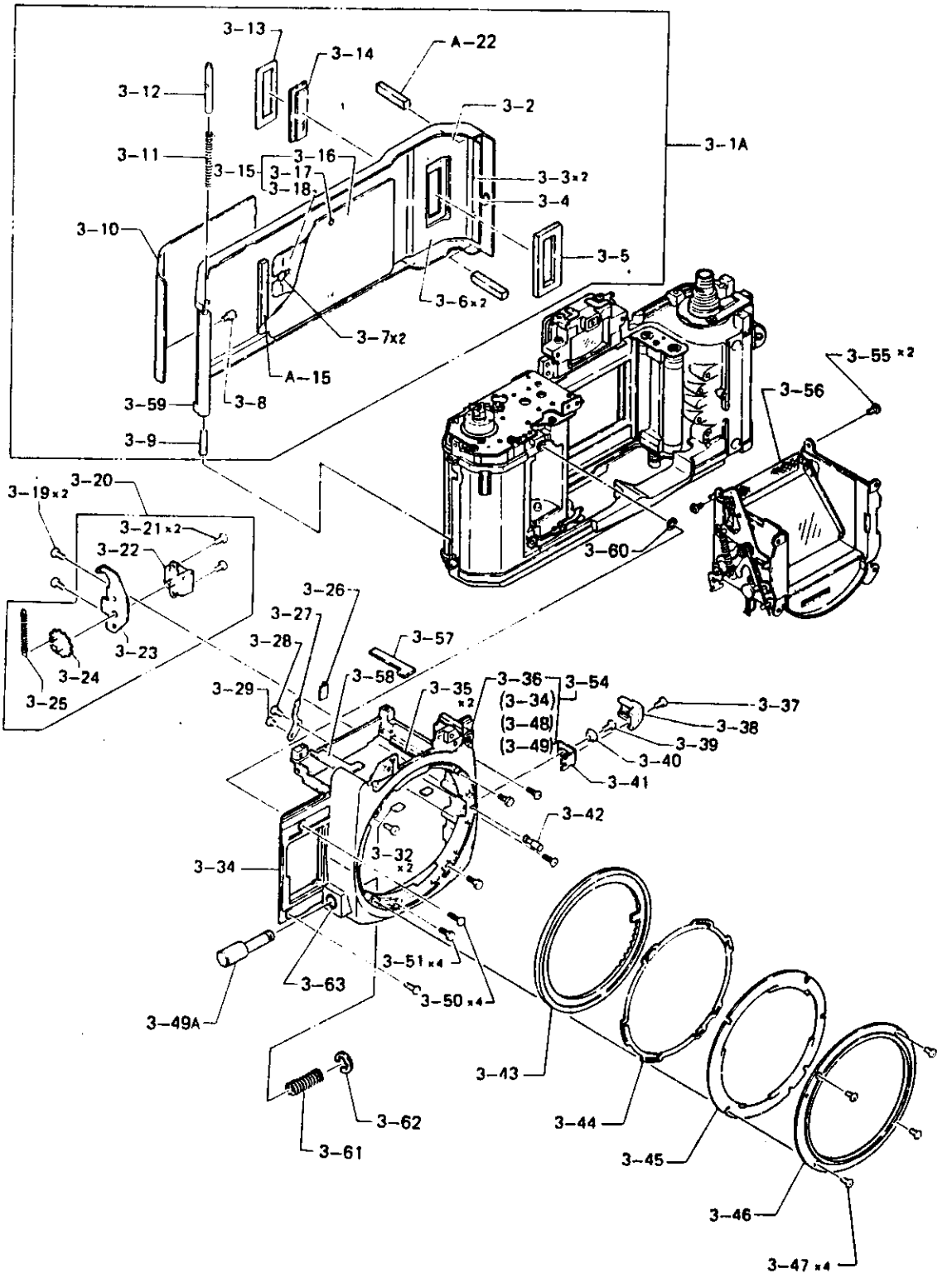
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
3 - 1A	302A2032001	Film chamber door assembly	1	
3 - 5	27B2052130	Moquette	1	
3 - 8	53B2052100	Screw	1	
3 - 9	17B2052070	Pin	1	
3 - 10	59B2052120	Leather	1	
3 - 11	50B2052080	Spring	1	
3 - 12	17B2052090	Moving pin	1	
3 - 13	84B2052050	Frame	1	
3 - 14	81B2052040	Film confirmation window	1	
3 - 15	44A2032110	Pressure plate assembly	1	
3 - 19	110M170301S	Screw	2	
3 - 20	41A2025800	F - value resistor assembly	1	
3 - 21	110M140101S	Screw	2	
3 - 22	117A2025790	Potentiometer assembly	1	
3 - 23	41B2045800	Holding plate	1	
3 - 24	34B2045820	Gear	1	
3 - 25	50B2045830	Spring	1	
3 - 26	27B2045730	Light shielding paper	1	
3 - 27	50B2045680	Leaf spring	1	
3 - 28	110M170201S	Screw	1	
3 - 29	110M200201S	Screw	1	
3 - 32	27B2046800	Moquette	1	
3 - 34	10B2045510	Lens mount base	1	
3 - 35	27B2361730	Moquette	2	
3 - 36	112A2025530	Synchro - terminal assembly	1	
3 - 37	53B2045720	Screw	1	
3 - 38	16B2045690	Lock - release button	1	
3 - 39	111M170351S	Screw	1	
3 - 40	31B2045710	Collar	1	
3 - 41	85B2045670	Release lever	1	
3 - 42	17B2045660	Lock pin	1	
3 - 43	23B2045630	Aperture transmission ring	1	

Fig. 3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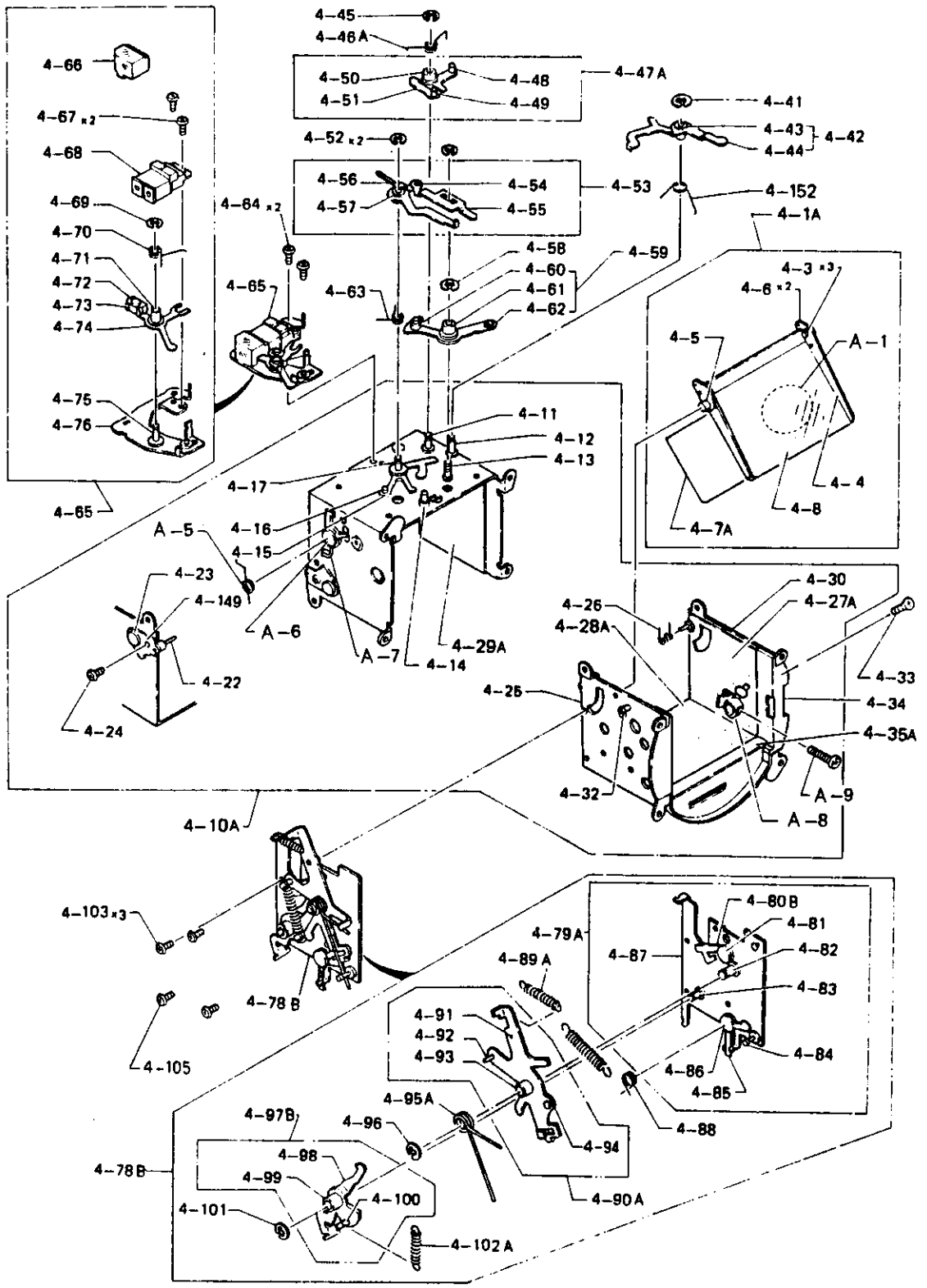
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
3 - 44	50B2045620	Leaf spring	1	
3 - 45	85B2045610	Claw ring	1	
3 - 46	23B2045600	Mount ring	1	
3 - 47	110M200501G	Screw	4	
3 - 48	82B2045760	Lever	1	
3 - 49A	16B2045750	Button	1	
3 - 50	110M200501S	Screw	4	
3 - 51	110M170351S	Screw	4	
3 - 54		Lens mount base assembly	1	
3 - 55	110M170251S	Screw	2	
3 - 56	27B2045770	Curtain	1	
3 - 57	55B2046720	Adjust washer (t=0.02)	0 ~	
	55B2046730	Adjust washer (t=0.05)	0 ~	
	55B2046740	Adjust washer (t=0.1)	0 ~	
	55B2046750	Adjust washer (t=0.2)	0 ~	
	55B2046760	Adjust washer (t=0.4)	0 ~	
	55B2046770	Adjust washer (t=0.5)	0 ~	
3 - 58	55B2046660	Adjust washer (t=0.02)	0 ~	
	55B2046670	Adjust washer (t=0.05)	0 ~	
	55B2046680	Adjust washer (t=0.1)	0 ~	
	55B2046690	Adjust washer (t=0.2)	0 ~	
	55B2046700	Adjust washer (t=0.4)	0 ~	
	55B2046710	Adjust washer (t=0.5)	0 ~	
3 - 59	11B2052010	Film chamber door	1	
3 - 60	55B95280	Washer (t=0.02)	0 ~	
	167M23005	Washer (t=0.05)	0 ~	
	55B95390	Washer (t=0.03)	0 ~	
A - 15	27B2052140	Moquette	1	
A - 22	27B2489110	Moquette	2	
3 - 61	50B2046070	Spring	1	
3 - 62	191M012T	E - clip	1	

Fig. 4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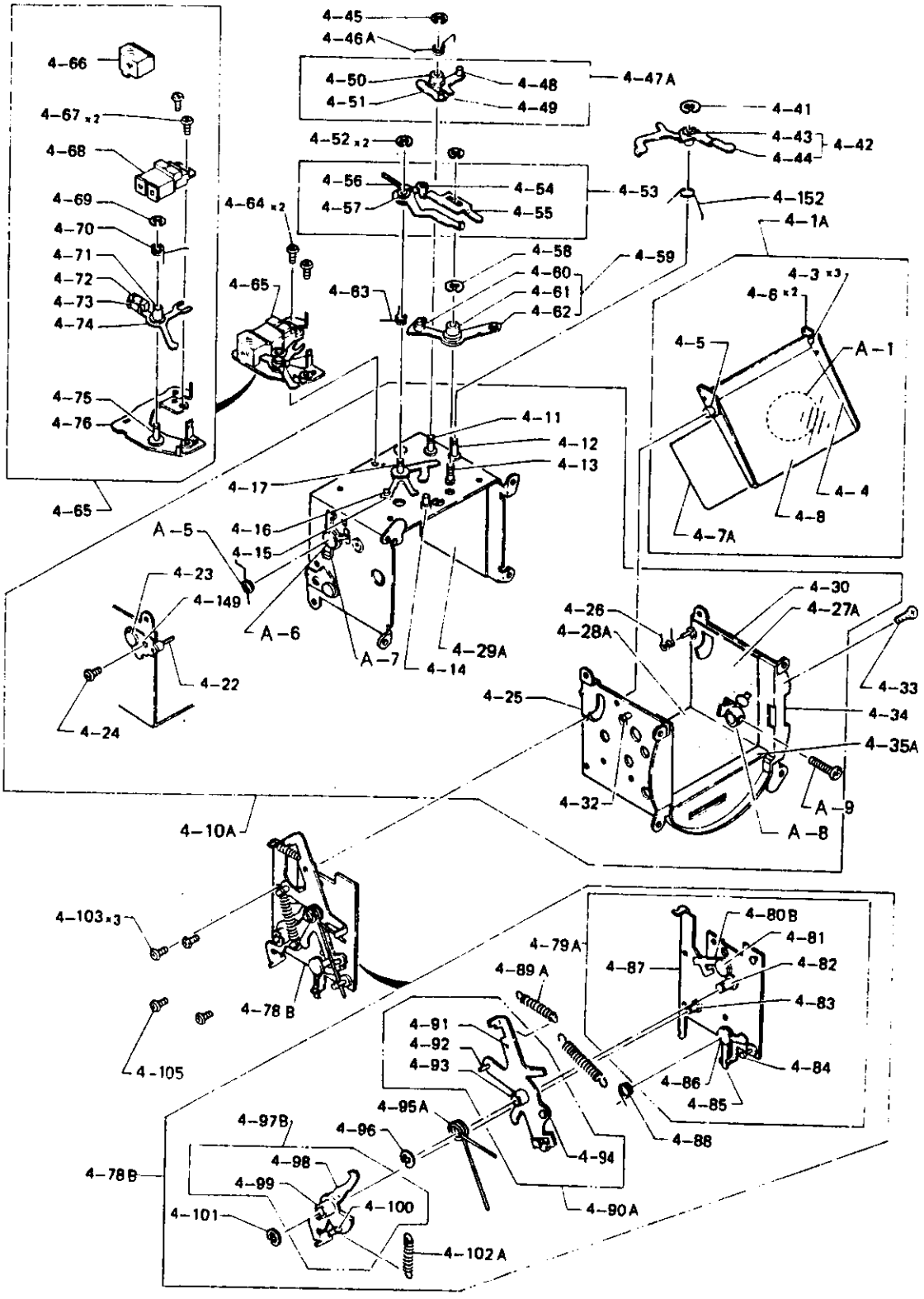
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
4 - 1A	3A2738241	Mirror assembly	1	
4 - 7A	27B2360991	Velvet	1	
4 - 8	3B2763990	Mirror	1	
4 - 10A	11A2453251	Mirror case assembly	1	
4 - 24	110M170141S	Screw	1	
4 - 26	50B2360890	Spring	1	
4 - 27A	27B2360915	Velvet	1	
4 - 28A	27B2360931	Velvet	1	
4 - 29A	27B2360921	Velvet	1	
4 - 33	110M140501S	Screw	1	
4 - 34	11B2360800	Cover	1	
4 - 35A	27B2046001	Velvet	1	
4 - 41	191M012T	E - clip	1	
4 - 42	47A2453540	Lever assembly	1	
4 - 45	191M012T	E - clip	1	
4 - 46A	50B2458511	Spring	1	
4 - 47A	47A2453471	Lever assembly	1	
4 - 52	191M012T	E - clip	2	
4 - 53	47A2453380	Lever assembly	1	
4 - 58	191M012T	E - clip	1	
4 - 59	47A2453350	Lever assembly	1	
4 - 63	50B2458430	Spring	1	
4 - 64	110M170141S	Screw	2	
4 - 65	41A2453630	Magnet assembly	1	
4 - 66	11B2458630	Cover	1	
4 - 77		Washer	1	
4 - 78B	46A2452901	Base plate assembly	1	
4 - 79A	46A2453911	Base plate assembly	1	
4 - 88	50B2457980	Spring	1	
4 - 89A	50B2458071	Spring	1	
4 - 90A	47A2453031	Quick return charge lever assembly	1	
4 - 95A	50B2458081	Spring	1	

Fig. 4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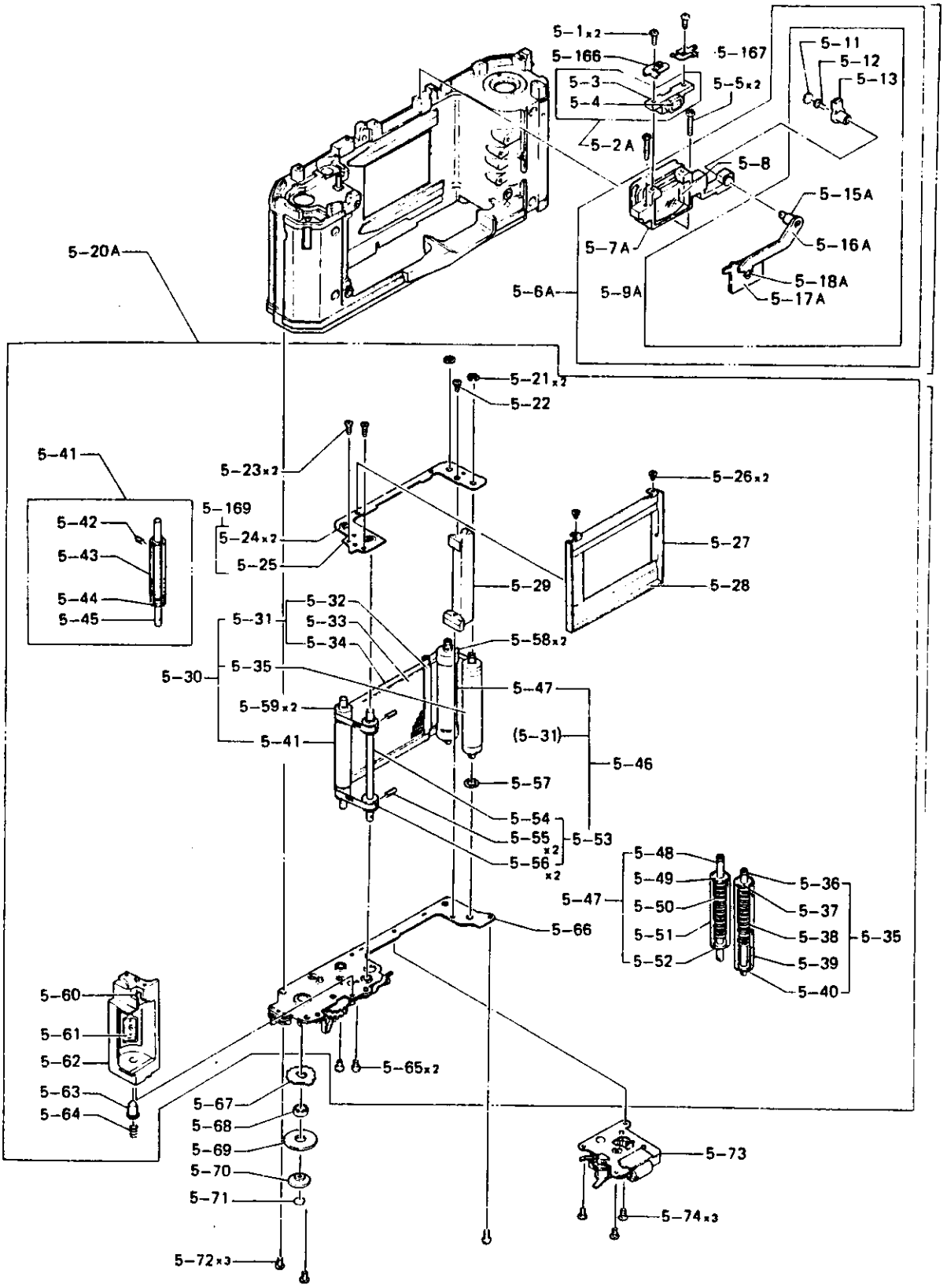
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
4 - 96	191M015T	E - clip	1	
4 - 97B	47A2453121	Lever assembly	1	
4 - 101	191M012T	E - clip	1	
4 - 102A	50B2458091	Spring	1	
4 - 103	110M170141S	Screw	3	
4 - 105	111M170141S	Screw	1	
A - 5	50B2048631	Spring	1	
A - 9	110M140651S	Screw	1	
4 - 152	50B2458321	Spring	1	

Fig. 5 -1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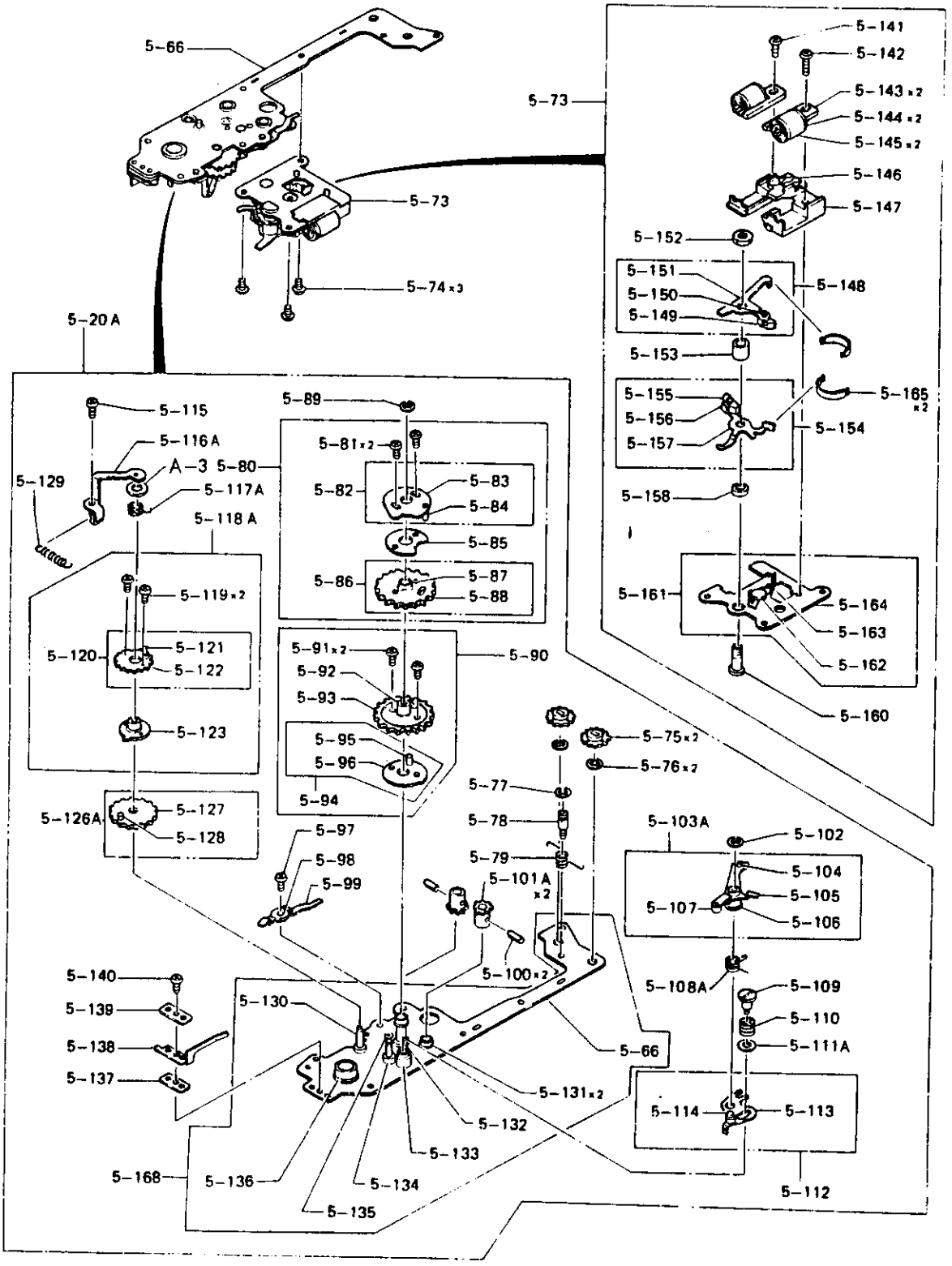
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
5 - 1	113M170501S	Screw	2	
5 - 2A	106A2037291	Photocell assembly	1	
5 - 5	110M170951S	Screw	2	
5 - 6A	12A2024411	Eyepiece assembly	1	
5 - 9A	46A2024201	Eyepiece shutter assembly	1	
5 - 11	59B2044310	Leather	1	
5 - 12	53B2044300	Screw	1	
5 - 13	47B2044290	Lever	1	
5 - 20	305A2021500	Focal plane shutter assembly	1	
5 - 21	191M015T	E - clip	2	
5 - 22	113M170501S	Screw	1	
5 - 23	114M170501S	Screw	2	
5 - 26	110M140121S	Screw	2	
5 - 27	27B2041810	Light shielding plate	1	
5 - 28	27B2042040	Moquette	1	
5 - 29	13B2041760	Column	1	
5 - 30	38A2021630	2nd shutter blind assembly	1	
5 - 46	38A2021620	1st shutter blind assembly	1	
5 - 57	55B99240	Washer	1	
5 - 60	109B2041740	Contact piece	1	
5 - 61	5B2042300	Battery label	1	
5 - 62	13B2041720	Battery compartment	1	
5 - 63	109B2042280	Contact point	1	
5 - 64	50B2042290	Spring	1	
5 - 65	114M170501S	Screw	2	
5 - 67	34B2054000	Notched gear	1	
5 - 68	42B2054010	Collar	1	
5 - 69	60B2054030	Seat plate	1	
5 - 70	33B2054040	Clutch	1	
5 - 71	58B2054050	Cover plate	1	
5 - 72	110M200301S	Screw	3	
5 - 73	46A2022710	Magnet base plate assembly	1	

Fig. 5-2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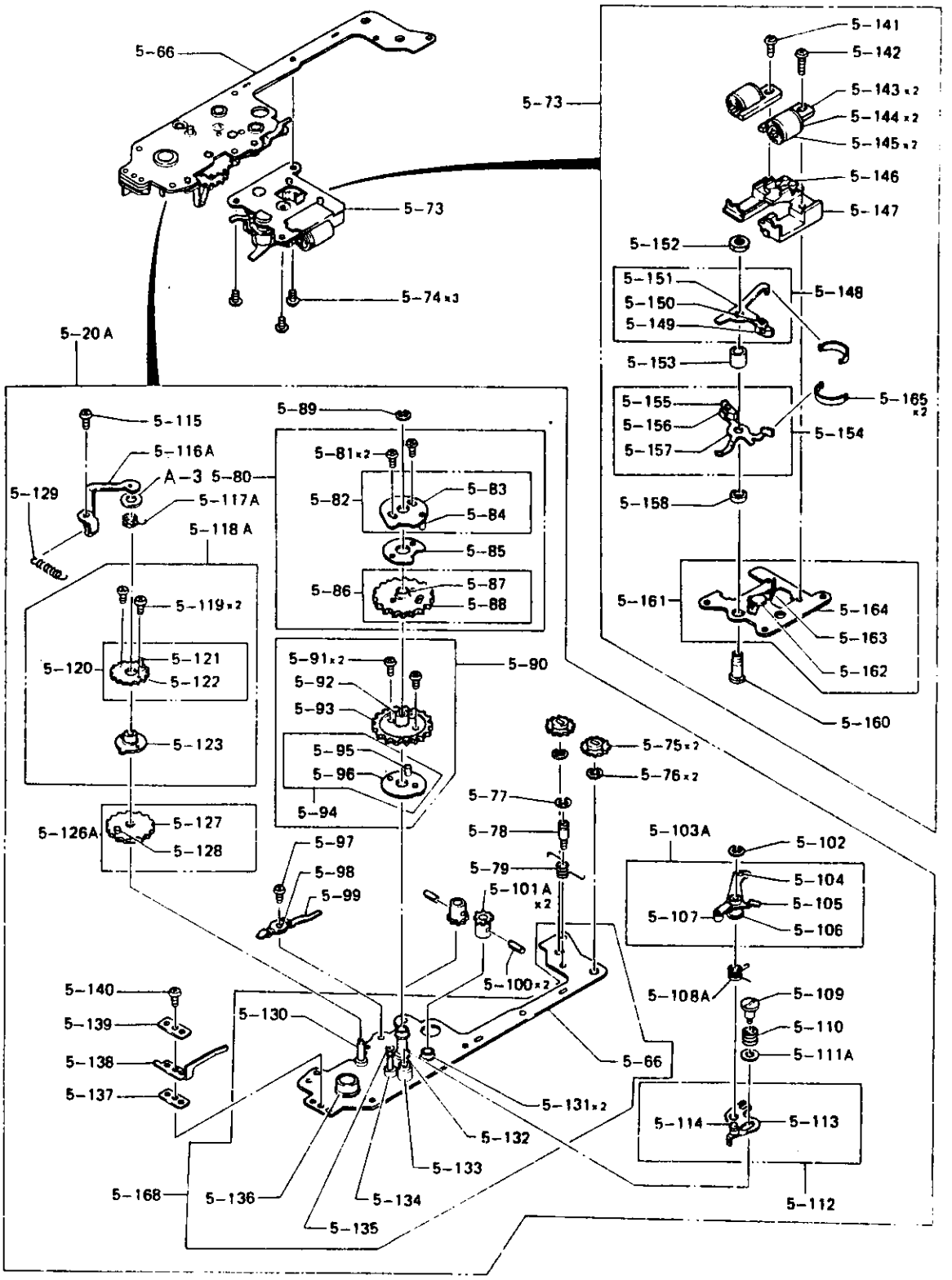
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
5 - 74	110M140151S	Screw	3	
5 - 75	34B2041800	Ratchet gear	2	
5 - 76	191M015T	E - clip	2	
5 - 77	191M020H	E - clip	1	
5 - 78	53B2041790	Screw	1	
5 - 79	50B2041780	Click spring	1	
5 - 80	34A2021910	2nd shutter blind gear assembly	1	
5 - 81	110M140221S	Screw	2	
5 - 82	35A2021930	Cam plate assembly	1	
5 - 85	24B2041920	Spacer	1	
5 - 86	34A2021900	Gear assembly	1	
5 - 89	191M015T	E - clip	1	
5 - 90	34A2021850	1st shutter blind gear assembly	1	
5 - 91	110M140161S	Screw	2	
5 - 94	45A2021820	Cam assembly	1	
5 - 97	110M170201S	Screw	1	
5 - 98	42B2042210	Collar	1	
5 - 99	47B2042200	Release lever	1	
5 - 100	182M100401T	Spring pin	2	
5 - 101A	34B126561	Gear	2	
5 - 102	191M015T	E - clip	1	
5 - 103A	47A2022221	Synchro - lever assembly	1	
5 - 108A	50B2042262	Spring	1	
5 - 109	53B99180	Screw	1	
5 - 110	50B2041880	Spring	1	
5 - 111A	55B2042310	Washer	1	
5 - 112	47A2021860	Stop lever assembly	1	
5 - 115	110M170181S	Screw	1	
5 - 116	87B2042010	Arm lever	1	
5 - 117	50B2042020	Spring	1	
5 - 118	34A2022000	Clutch gear assembly	1	
5 - 119	110M140201S	Screw	2	

Fig. 5-2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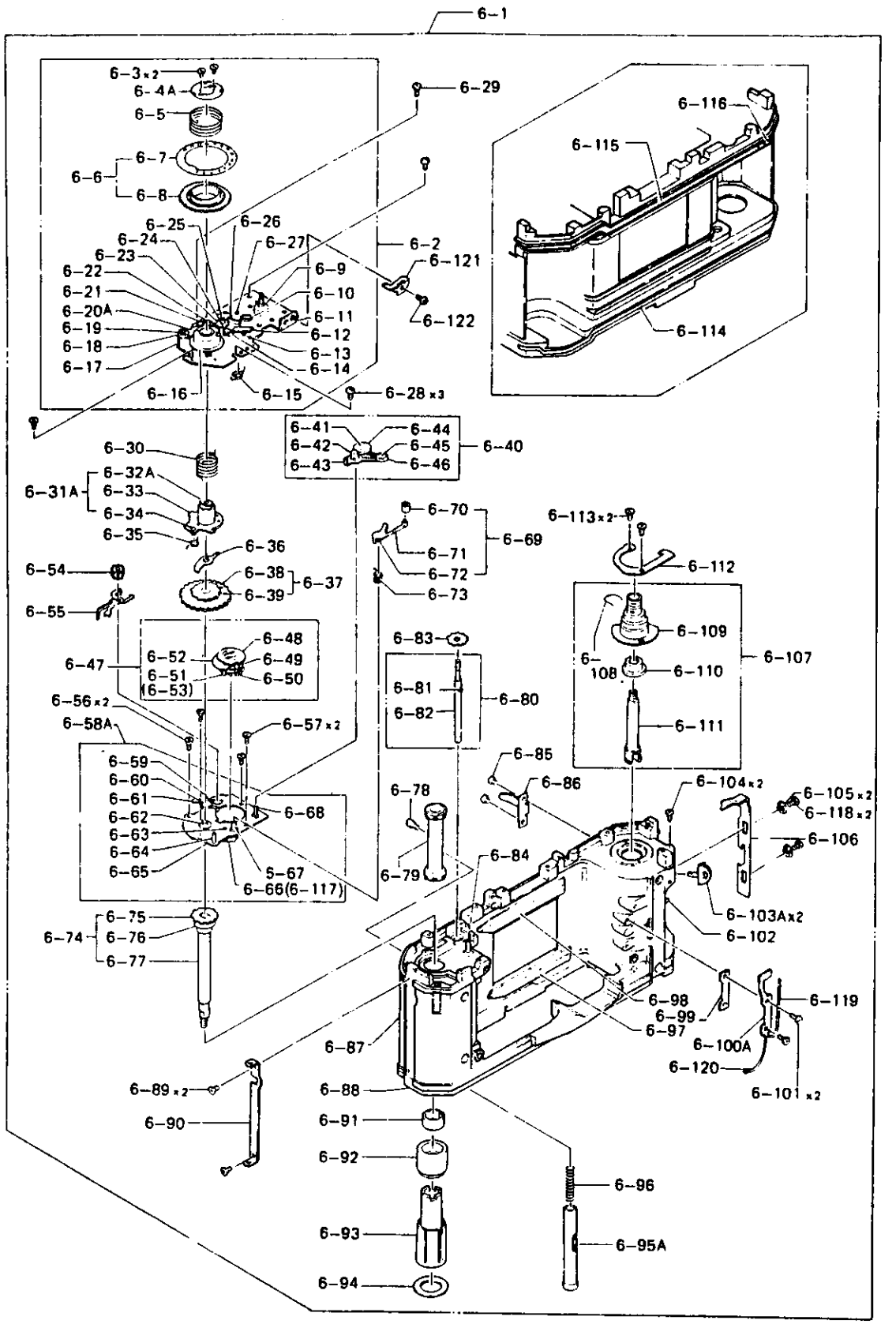
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
5 - 120	34A2021990	Gear base assembly	1	
5 - 123	32B2041980	Sleeve	1	
5 - 126	34A2021960	Intermediate gear assembly	1	
5 - 129	50B99660	Spring	1	
5 - 137	115B99680	Insulation plate	1	
5 - 138	109B2042030	Contact plate	1	
5 - 139	115B99680	Insulation plate	1	
5 - 140	110M140303S	Screw	1	
5 - 166	109B2057280	Contact piece	1	
5 - 167	109B2057270	Contact piece	1	
5 - 168	46A2021510	Bottom plate assembly	1	
5 - 169	46A2021680	Top plate assembly	1	
A - 3	55B2042350	Washer	1	

Fig. 6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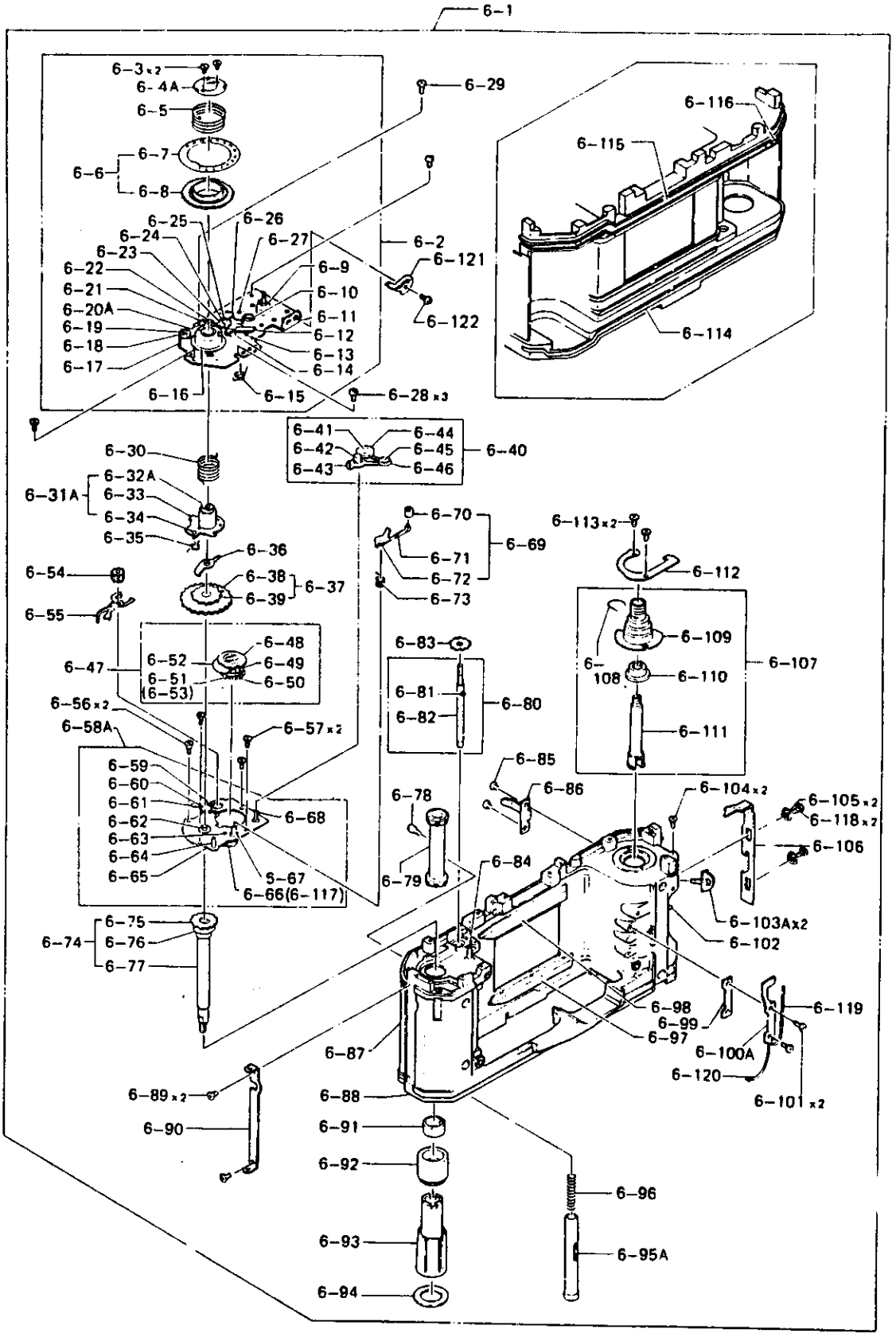
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
6 - 1	301A2025000	Camera body assembly	1	
6 - 2	46A2023750	Base plate assembly	1	
6 - 3	110M140101S	Screw	2	
6 - 4A	85B2045321	Holder	1	
6 - 5	50B2045310	Spring	1	
6 - 6	34A2025300	Gear assembly	1	
6 - 18	32B2045290	Collar	1	
6 - 19	110M140201S	Screw	1	
6 - 20A	47A2045281	Lever assembly	1	
6 - 28	110M170301S	Screw	3	
6 - 29	111M170301S	Screw	1	
6 - 30	50B2043720	Spring	1	
6 - 31A	47A2023661	Square hole plate assembly	1	
6 - 35	50B2043700	Spring	1	
6 - 36	47B2043690	Lever	1	
6 - 37	34A2023620	Ratchet wheel assembly	1	
6 - 40	47A2023370	Charge lever assembly	1	
6 - 47	34A2023490	Gear assembly	1	
6 - 54	34B2043210	Gear	1	
6 - 55	50B2043900	Release lever	1	
6 - 56	111M170351S	Screw	2	
6 - 57	110M170351S	Screw	2	
6 - 58A	46A2023251	Base plate assembly	1	
6 - 69	47A2023570	Lever assembly	1	
6 - 73	50B2043600	Spring	1	
6 - 74	32A2023050	Take - up spindle assembly	1	
6 - 78	53B2043170	Screw	1	
6 - 79	34B2043180	Sprocket	1	
6 - 80	32A2023150	Sprocket shaft assembly	1	
6 - 83	34B2043200	Gear	1	
6 - 84	32B2043020	Shaft	1	
6 - 85	110M170221G	Screw	2	

Fig. 6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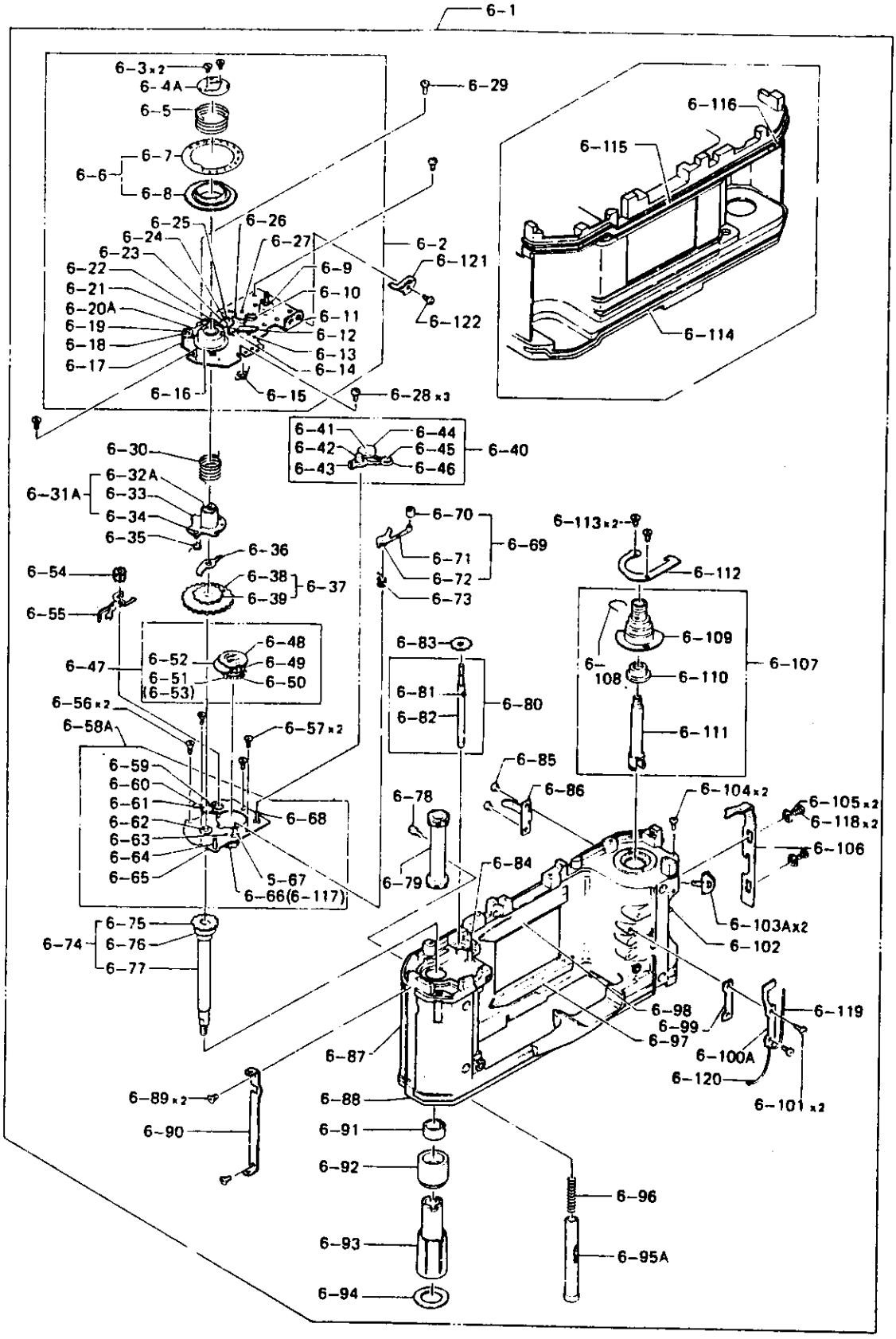
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
6 - 86	50B2044550	Leaf spring	1	
6 - 87	27B2045170	Moquette	1	
6 - 89	111M170251G	Screw	2	
6 - 90	19B2045130	Hinge support	1	
6 - 91	50B2043120	Friction ring	1	
6 - 92	23B2043100	Collar	1	
6 - 93	37B2043090	Spool	1	
6 - 94	55B2043130	Washer	1	
6 - 95A	32B2043221	Sprocket shaft	1	
6 - 96	50B2043230	Spring	1	
6 - 97	27B2044570	Light shielding plate	1	
6 - 98	27B2044560	Light shielding plate	1	
6 - 99	115B2044540	Insulation plate	1	
6 - 100A	109B2044530	Synchro contact	1	
6 - 101	53B19860	Screw	2	
6 - 102	17B2045140	Pin	1	
6 - 103A	41A2024580	Neck strap eyelet	2	
6 - 104	110M170701S	Screw	2	
6 - 105	31B2045120	Screw	2	
6 - 106	19B2045110	Lock plate	1	
6 - 107	32A2032550	Rewind spindle assembly	1	
6 - 108	50B2052560	Click spring	1	
6 - 109	32B2052550	Sleeve	1	
6 - 110	27B2052540	Light shielding barrel	1	
6 - 111	32B2052530	Rewind spindle	1	
6 - 112	50B2052570	Leaf spring	1	
6 - 113	110M170351S	Screw	2	
6 - 114	27B2045150	Moquette	1	
6 - 115	27B2045160	Moquette	1	
6 - 116	27B2045180	Moquette	1	
6 - 118	111M170301M	Screw	2	
6 - 119	230M15007B	Lead wire	1	

Fig. 6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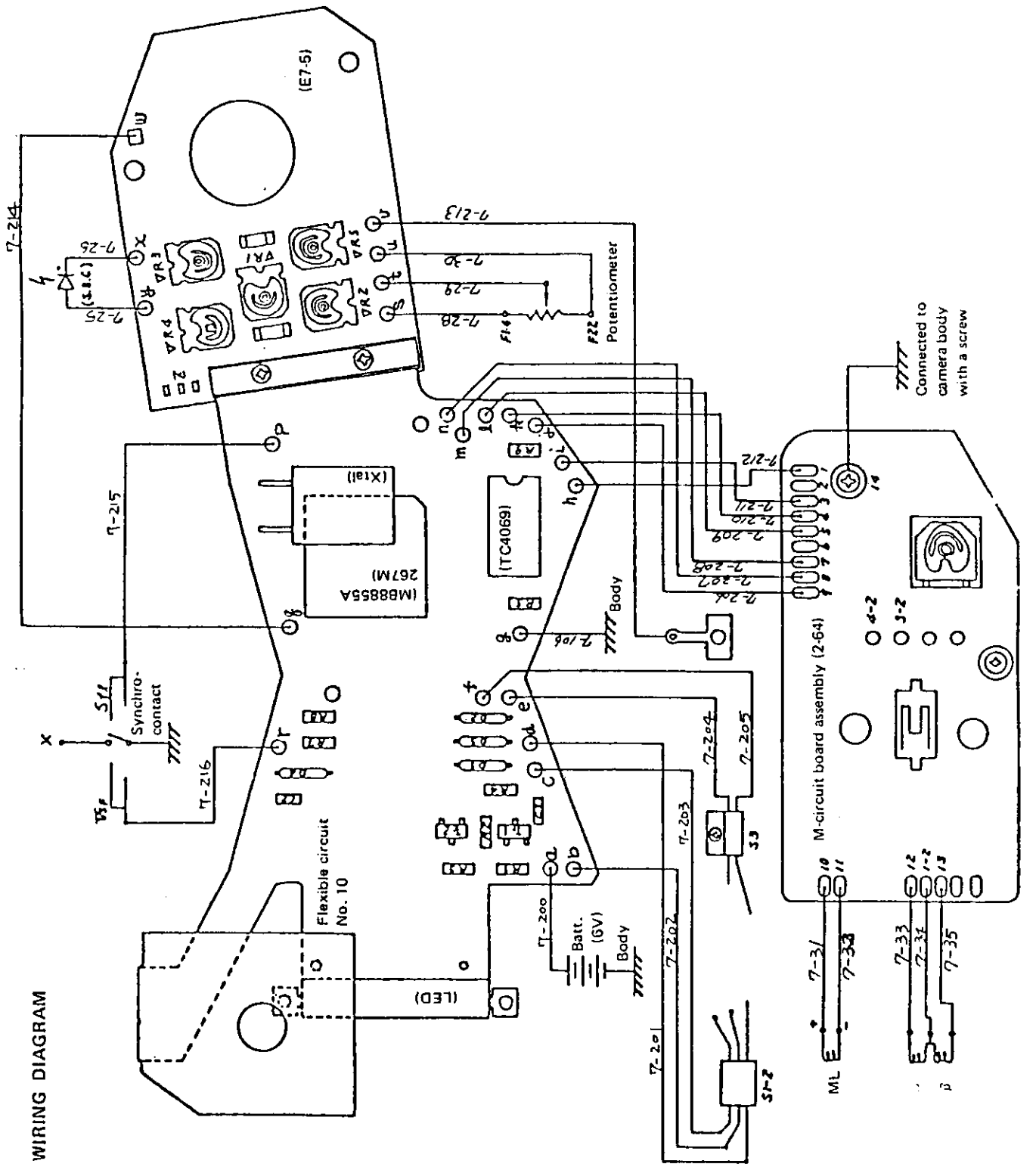
6-60
6-105×2
6-61
6-118×2
6-78
6-62
6-68
6-106
6-63
6-64
6-79
6-84
6-65
5-67
6-66(6-117)
6-103Ax2
6-102
6-75
6-74
6-76
6-77
6-98
6-119
6-99
6-97
6-87
6-100A
6-120
6-101×2
6-89×2
6-88
6-90
6-91
6-92
6-96
6-93
6-95A
6-94

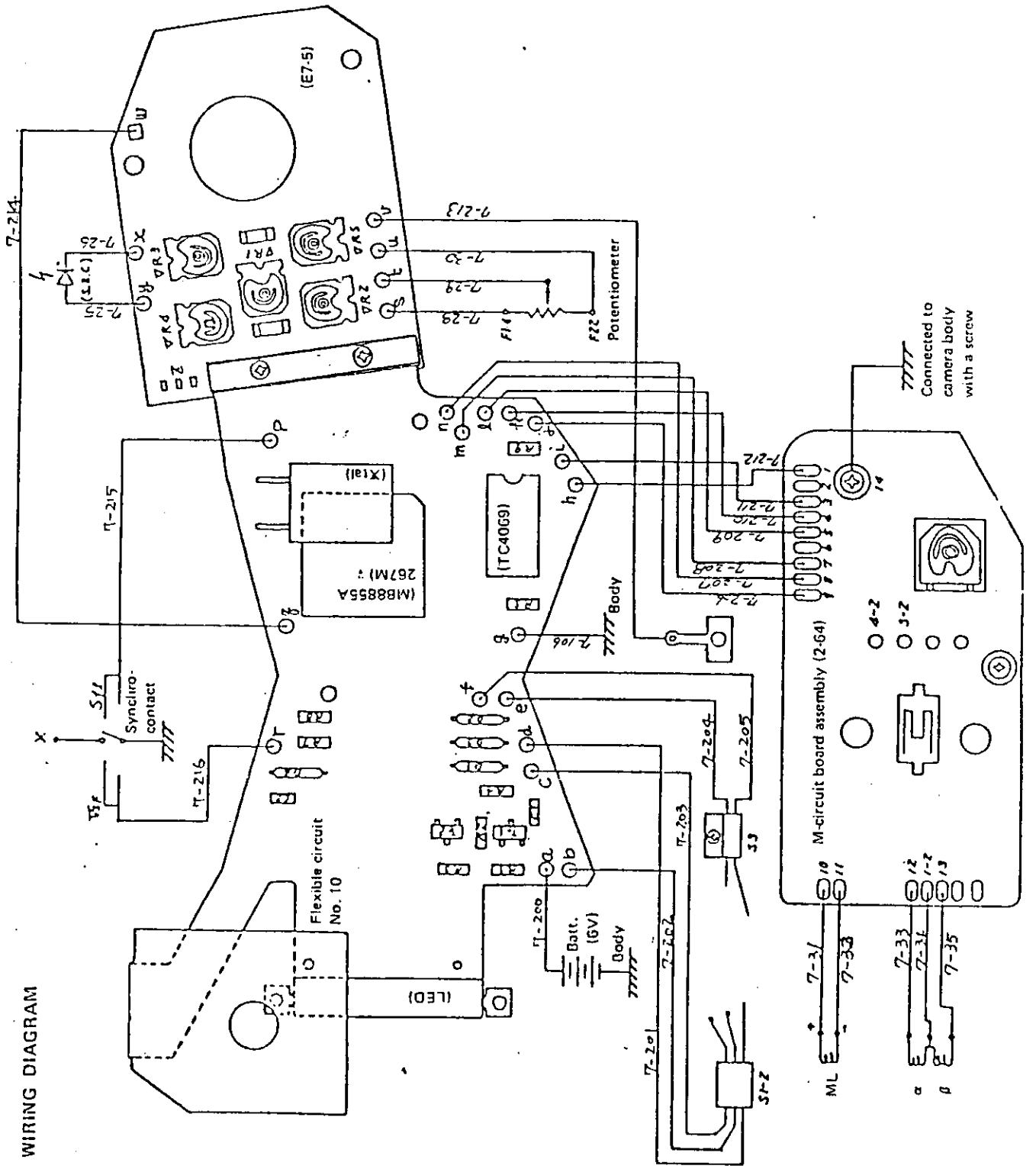
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
6 - 120	230M16807B	Lead wire	1	
6 - 121	50B2456210	Lock spring	1	
6 - 122	110M1701835	Screw	1	

Fig. 7


WIRING DIAGRAM
(E7-5)
Potentiometer
Connected to camera body with a screw
M-circuit board assembly (2-64)
Flexible circuit No. 10
(LED)
Batt. (6V)
Body
Synchro-contact
(TC4069)
(Xtal)
(MB8855A 267M)
ML

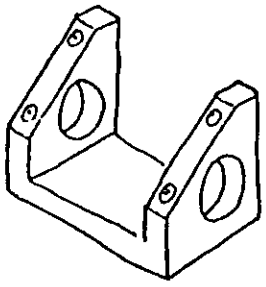
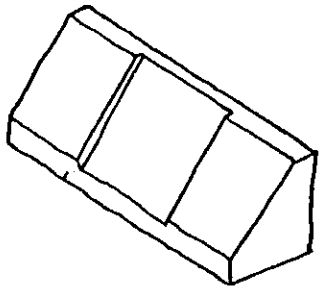
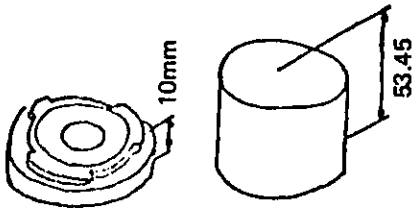
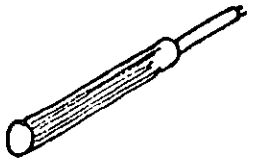
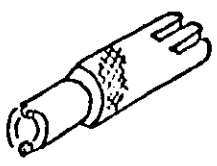
REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
7 - 25	230M04507W	Lead wire (white)	1	
7 - 26	230M050078	Lead wire (red)	1	
7 - 28	230M05007A	Lead wire (blue)	1	
7 - 29	230M05007W	Lead wire (white)	1	
7 - 30	230M05007G	Lead wire (green)	1	
7 - 31	230M02507D	Lead wire (orange)	1	
7 - 32	230M02507A	Lead wire (blue)	1	
7 - 33	230M02507W	Lead wire (white)	1	
7 - 34	230M02507R	Lead wire (red)	1	
7 - 35	230M02507H	Lead wire (gray)	1	
7 - 37A	116K278600	Capacitor (0.047μF) (red)	0 ~	
7 - 37B	116K278610	Capacitor (0.068μF) (purple)	0 ~	
7 - 37C	116K278620	Capacitor (0.1μF) (yellow)	0 ~	
7 - 37D	116K278570	Capacitor (0.22μF) (gray)	0 ~	
7 - 37E	116K278910	Capacitor (0.33μF) (orange)	0 ~	
7 - 37F	116K278640	Capacitor (0.47μF) (green)	0 ~	
7 - 106	230M02007B	Lead wire (black)	1	
7 - 200	230M05007R	Lead wire (red)	1	
7 - 201	230M09007C	Lead wire (brown)	1	
7 - 202	230M08507A	Lead wire (blue)	1	
7 - 203	230M08507Y	Lead wire (yellow)	1	
7 - 204	230M04007G	Lead wire (green)	1	
7 - 205	230M04007G	Lead wire (green)	1	
7 - 206	230M10007G	Lead wire (green)	1	
7 - 207	230M06007W	Lead wire (white)	1	
7 - 208	230M09007H	Lead wire (gray)	1	
7 - 209	230M09507A	Lead wire (blue)	1	
7 - 210	230M09007C	Lead wire (brown)	1	
7 - 211	230M10507D	Lead wire (orange)	1	
7 - 212	230M10507R	Lead wire (red)	1	
7 - 213	230M06007W	Lead wire (white)	1	
7 - 214	230M05507D	Lead wire (orange)	1	

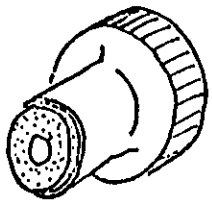
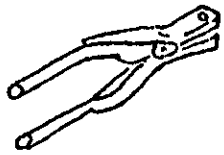
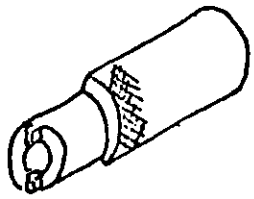
Fig. 7

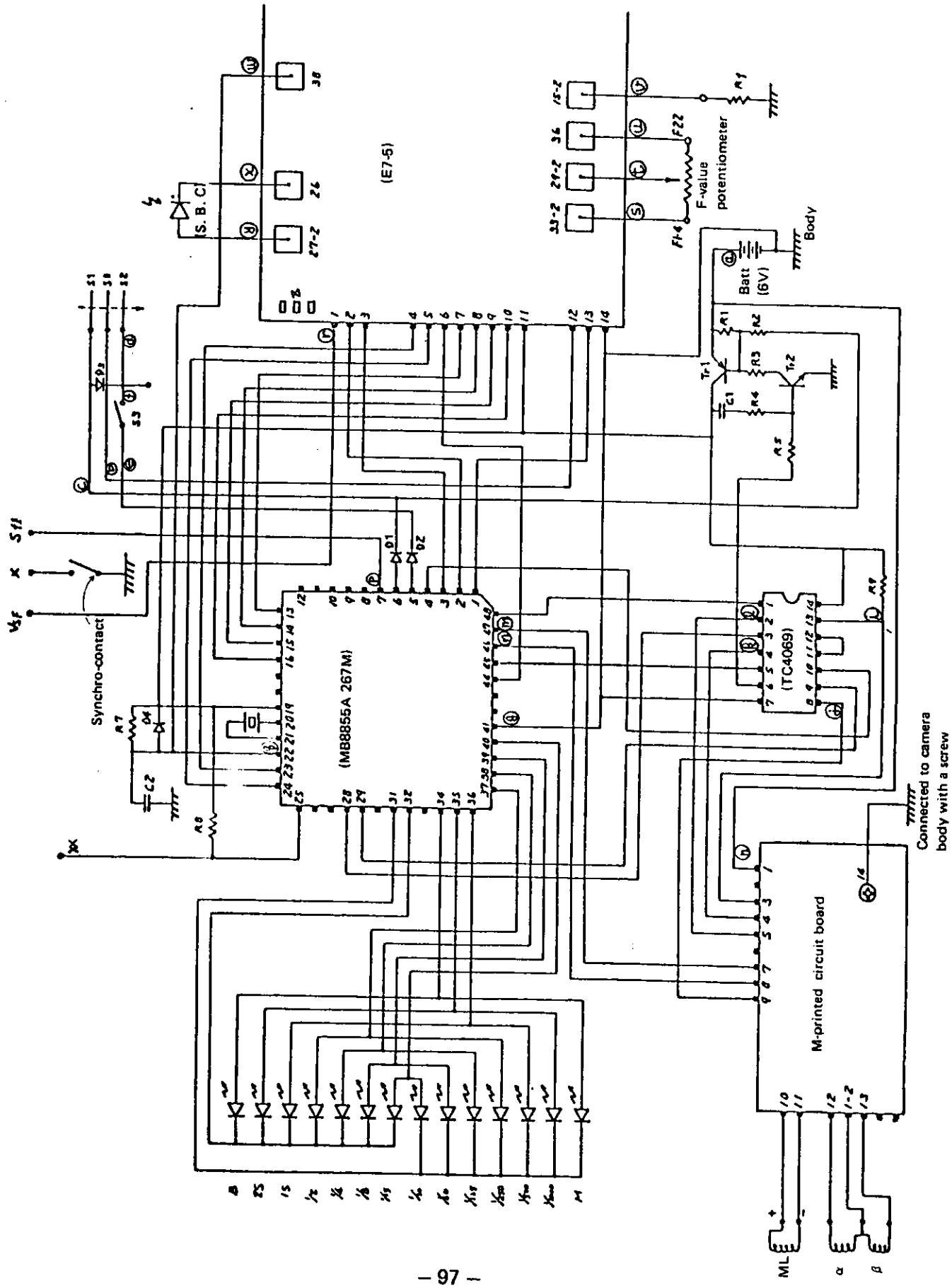

WIRING DIAGRAM
(E7-5)
Potentiometer
Connected to camera body with a screw
M-circuit board assembly (2-64)
Flexible circuit No. 10
Batt. (6V)
Body
Syncro-contact
(LED)
(TC40G9)
(MB8855A 267M)
(Xtal)
ML

REF NO.	PART NO.	PART NAME	Q'TY	REMARKS
7 - 215	230M02007W	Lead wire (white)	1	
7 - 216	230M01507Y	Lead wire (yellow)	1	

Ⅵ SPECIAL REPAIR TOOL LIST

Tool No.	Sketch	Application	Remarks
J10633		For adjustment of 45° mirror angle	Used commonly with AX-5 and AX-1
J971		○ To test 45° mirror angle against film rail plane. ○ Cannot be used for 45° mirror angle adjustment.	Used commonly with AX-5 and AX-1
J972		Adapter and master gauge used for adjustment of flangeback	Used commonly with AX-5 and AX-1
J973		For adjustment of variable resistor	Used commonly with AZ-1, AX-5 and AX-1
J10354		○ For removal of film rewind knob (1-54) ○ For removal of nut (1-63)	Used commonly with AX-1

Tool No.	Sketch	Application	Remarks
J306		For removal of screw (1 - 42)	Used commonly with ST705W, AZ - 1, ST605, AX - 5 and AX - 1
P73 - JA1		For removal of focal plane shutter spring pin (5 - 100)	Used commonly with ST701, ST801, ST901, ST601, ST605, ST705, ST705W, AZ - 1, AX - 5 and AX - 1
J970		For removal of winder coupler (5 - 70)	Used commonly with AX - 5 and AX - 1


(E7-5)
S. B. C
F-value potentiometer
Body
Batt (6V)
Synchro-contact
(MB8855A 267M)
(TC4069)
M-printed circuit board
Connected to camera body with a screw
ML